Nutritional Medicine

A Vital Partner of 21st Century medicine

With special reference to the case of Cyprus

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PROJECT REPORT

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NOTE

This Project Report includes detailed descriptions of each part of the study and it is submitted together, as an integral part, with the EVIDENCE OF ACHIEVEMENT, a book prepared by Nitsa Kiliari (2011), as a partial fulfilment of the requirements of Middlesex University for the award of a Professional Doctorate Degree in Nutritional Medicine.

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SUMMARY

This action research was carried out within the context of a Professional Doctorate thesis. The aims were: to build up sound evidence to substantiate my arguments for the role of Nutritional Medicine as a vital partner of 21st century medicine, particularly in the area of prevention and treatment of chronic disease; to critically investigate the context and conditions within which this profession aspires to secure a respectable position along the spectrum of contemporary medical practice; and to evaluate the possibility of inclusion of Nutritional Medicine in the National Health System of Cyprus. Aiming to enhance and strengthen the validity and reliability of the evidence, four different methodologies were used, based on the logic of triangulation. A volume of existing knowledge, obtained from a profound review of the work and writings of several scholars, and researchers, and from official reports, both at national (Cyprus) and international level, was contrasted, compared, and updated with fresh knowledge created by:

- A Survey conducted in Cyprus during the period October-December 2008, with the support of the University of Nicosia;
- Interviewing a representative number of key actors, on the basis of their authority to directly or indirectly influence the workings and politics of the practice of medicine in Cyprus; and
- Analysis of a number of randomly selected case studies from my clinical practice as a Nutritional Medicine practitioner.

The analysis and synthesis of findings revealed that the first decade of the twenty first century coincides with a high awareness, both worldwide and in Cyprus, for the rising incidence of chronic disease which, in spite of the unprecedented developments in several areas of the provision of healthcare of the last decades, appears to occur at increasingly lower ages and within the most deprived groups of the population. A multitude of developments at all levels –political, medical, academic, and social- demonstrate significant trends towards a new philosophy in the provision of healthcare which, as proposed by key actors and scholars, focuses on the whole patient rather than the disease and emphasises prevention rather than treatment. Within this New Paradigm in the provision of healthcare Nutritional Medicine appears to be an important, evidence-based, partner. The volume of evidence substantiating the vital inter-disciplinary role of Nutritional Science is impressive and increasingly rising. The example of the United Kingdom is presented in this report, where, in recognition of its important contribution in enhancing public health, Nutritional Medicine (otherwise termed Nutritional Therapy) is coming under regulation.

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1. INTRODUCTION & TERMS OF REFERENCE/OBJECTIVES

1.1. BACKGROUND

A series of reports published by national and international organisations during the last decade, raise serious concerns for the rapidly rising incidence of chronic disease, which is reported as the major cause of death and disability, and which appears to occur increasingly at lower ages and particularly amongst the most deprived groups of the population (*WHO [2003i, 2003iii, 2004i. 2004ii, 2005i, 2006, 2006iii, 2006iv, , 2007, 2007i, 2007ii, 2007viii, 2007xi, 2008; 2008i, 2008i]; WHO Europe [2006, 2008, 2008i, 2008ii]; EU [2005;2007]; Evans et al., 2001; Wolf & Akesson 2001; Mathers & Loncar 2006; Davis & Wagner 1999; Zimmet 2000*) -Cyprus not being an exception, (*WHO 2006iii, 2006iv, 2007xi, 2008; Antoniadou 2005; Golna et al., 2004; Zachariadou et al., 2008; Tyrovolas et al., 2009; Borg et al., 2006; Lazarou et al., 2008; Savva et al., [2005; 2007]*). Experts point out that the remarkable progress of humanity in controlling, and in most cases eliminating, the terrible infectious diseases of the past has been overshadowed by the sweeping outbreak of the "invisible" epidemics of heart disease, stroke, diabetes, cancer, and other chronic diseases, which for the foreseeable future will take the greatest toll in deaths and disability, (*WHO 2005i; WHO 2008*). Researchers speak of an epidemiological transition, -during which people gain years of life, alas, in disability (DALYs)[1]- and which is rapidly spreading from the rich countries, who have already completed the transition, to the rest of the world. Since most chronic diseases do not result in sudden death, people become progressively ill and debilitated, (*WHO 2005a*).

About a decade ago it was estimated that, about 691 million people worldwide had high blood pressure, 165 million suffered from rheumatoid arthritis, and 29 million from dementia, while diabetics were estimated to increase from 135 million to 300 million by 2025, (*Davis & Wagner 1999*). Five years later the World Health Organisation reported that by the year 2020 chronic diseases are expected to be responsible for 73% of deaths and 60% of the burden of

[1] DALYs: the number of years lost form premature death plus the years lived with a disability)Davis et al., 1999)

disease, compared to 60% and 47% respectively in the end of the twentieth century, (*WHO 2004ii*). More recent reports claim that half of deaths from chronic diseases occur prematurely in people under 70 years of age, and are expected to increase by 17% worldwide, and 25% in the Eastern Mediterranean, over the next 10 years,) (*WHO 2005i; WHO 2008*).

Equally high importance is attributed to the economic burden of chronic disease on societies, which is estimated by experts to greatly increase with an increasingly ageing population, (*WHO [2002, 2003, 2003iii, 2004i, 2004ii, 2005i, 2007ii, 2008, 2008i]; WHO Europe 2008: Age pyramid 2005, p.12; EU 2005; Zimmet 2000; Elliot & Ong 2002*). By the year 2050, the number of people over 65 is estimated to grow by 70%, and of those over 80 by 170%, skyrocketing demand for healthcare. This will amount to about 25% increase in spending as a share of GDP, (*WHO Europe 2006*). The World Health Organisation reports that chronic diseases hinder economic growth and reduce the development potential of countries by directly affecting the quantity and productivity of labour and indirectly savings and investment, (*WHO 2005; WHO 2002ii*). EU experts claim that if people can remain healthy as they live longer the estimated increase in healthcare spending could be halved, (*EU 2007i*).

Cyprus appears to follow closely these worldwide trends, with an ageing population and a high proportion of obese and chronically diseased people (*WHO 2006iv [graph: Age pyramid]; Golna et al., 2004 [table 2]; Antoniadou 2005; WHO 2008*). Researchers report heart disease as the main cause of death, followed by cancer, and diseases of the respiratory and cerebrovascular systems (*Golna et al., 2004 [figure 4, p.9]; WHO 2006iii, 2007xi [fig. p.1; fig. p.2]*). The economic consequences of the diseased population are also stressed by researchers who claim that over the next 25 years, Cyprus will experience a decline in the proportion of the population aged less than 15 years and an increase in that over 65 years. This prospect will, inevitably, be accompanied by reduction in labour force, shrinking of social security revenues and increase of the costs of healthcare. A study published by the Harvard School of Public Health in July 2003, (*Hsiao and Jakab, 2003*) analysed the financial burden borne by households when they seek health services. It was

found that households with chronic illnesses or a severe acute illness may face catastrophic levels of health expenditure, (*Golna et al., 2004*).

Within the context of this worldwide problematisation, scholars and researchers stress the need for a new philosophy in the provision of healthcare towards a new more patient-centred paradigm which will emphasise on prevention of disease and maintenance of health rather than treatment, (*WHO [1997; 2002i; 2002iii; 2003i, 2004i, 2004ii, 2005i, 2007i, 2008]; Boyles et al.,, 2008; WHO Europe 2006; EU 2005; Vogel et al., 2005; Nahleh & Tabbara 2003; Yach et al., 2004; Good & Mavromatas 2008; Weisburger 2000; McCarty 1981; Zimmet 2000; Shai et al., 2001; Calman, 1994; Shepherd 2009; Savva et al., 2007; Harris 2009*). The multifactorial aetiology of disease is stressed by a volume of publications, (*WHO [2003i, 2004i, 2004ii, 2005i, 2007ix, 2008]; Percy-Smith 2007; EU 2005; Yach et al., 2004; Tyrovolas et al., 2009; ,Weisburger 2000; Goode & Mavromatas 2008*). Official reports point out that, chronic diseases have deeper roots, or 'causes of the causes', reflecting the forces driving social, economic and cultural change, (*WHO [2005i, 2007ix]*) and result from the complex multidimensional interactions between individuals and their environment including their opportunities for promoting health, (*WHO Europe, 2006; WHO 2005ii*). Not surprisingly, the role of diet and lifestyle is emphasised in all reports, as among the leading causes of disease and premature death, (*WHO [2002, 2002i, 2002ii, 2000iii, 2003, 2003i, 2004i, 2004ii, 2005, 2007i, 2008]; Popkin 2009; Shai et al., 2001; Schenk et al., 2008; Martinez-Gonzalez et al., 2009; Zimmet 2000; Golna et al., 2004*). Experts suggest that 80% of heart disease, stroke and diabetes type II, as well as 40% of cancer could be prevented, with a correct diet and lifestyle, (*WHO [2005; 2008]; WHO Europe, 2006*). A preliminary review allows no doubt that there exists an impressive, and increasingly rising, volume of scientific studies in support of the power of diet and lifestyle in the prevention of disease and the maintenance and/or restoration of health, (*Aihara 1986; Balch & Balch 2000; Baldewicz et al., 1998; Ballentine, 1978; Benton & Donohoe 1999; Benyon 1998; Bland [2002 and 2004]; Bodane & Brownson 2002; Bohager 2008; Calvaresi & Bryan 2001; Cattaneo et al.,, 2001; Chakraborti et al., 2002; Chen et al., 2009; De Roos et al., 2009; Fairfield & Fletcher 2002; Fenech 2001; Ford 2001; Garrow et al., 2000; Goldberg et al., 2002; Gonzalez-Gross et al., 2001; Goode & Mavromatas 2008; Green & Miller 1999; Harper & Jacobson 2001; Herbert 2000; Jensen 1978; Jones et al., 2005; Kellof et al., 2000; Knekt et al., 2002; Lamb 2005; Lamson & Plaza 2002; Levin et al., 2006; Liska & Bland 2005; Mancuso et al., 2007; Martinez-Gonzalez et al., 2009; McCarty [1981; 2000, 2000i]; McKay et al., 2000; Meydani 2001; Michaud et al., 2000; Molloy & Scott 2001; Panayiotakos et al., [2007i 2007ii, 2009]; Pizzorno & Murray 2006]; Pizzorno et al., 2002; Plaskettt 2004 (i-xv); Popkin 2009; Quinn & Jones 2005; Radhika et al., 2002;*

Robinson et al., 1998; Schenk et al., 2008; Shepherd 2009; Simopoulos [1999; 2002]; Song et al., 2009; Stoll 1998; Sudak 2005; Taylor et al., 2002; Tyrovolas et al., 2009; Verhaar 2002; Vogel et al., 2005; Vosper 2009; Wang et al., 2001; Weber et al., 1996; Weisburger 2000; Werbach & Moss 1999; Werbach [1996, 1997, 1999 2002]; Wilt et al., 1998; Witte et al., 2001; Zhou et al., 2009;).

In view of this evidence, it appears that health systems, facing the challenge of chronic disease prevention and control within the context of a new paradigm in the provision of healthcare, which attributes high importance on nutritional and lifestyle factors, will demand healthcare practitioners that possess the knowledge and expertise in this area. A closer look, however, at available evidence, raises serious concerns on the extent to which evidence-based therapeutic nutritional interventions are effectively applied within the current establishment of the provision of healthcare . Evidence from previous research had already demonstrated that the majority of contemporary physicians are not adequately trained for these kind of interventions in spite of the fact that there exists a general belief that nutritional advice falls within the realm of responsibility of the medical community, (*Clifford 2000; Hark & Morrison 2000; Jeor et al., 2006; Kolasa 2001; Krebs & Primak 2006; Taren et al., 2001; Vickers & Zollman 1999; Shai et al., 2001*)

1.2. THE AIMS

This action research project was designed in response to this worldwide health awareness and under the burden of additional evidence, accumulating from my practice in the area of Nutritional Medicine. The ultimate aim of the research is to contribute effectively to the improvement of the provision of healthcare in Cyprus in accordance to the new worldwide -particularly European Union- trends. Most importantly, this project's goals are consistent with my deep-rooted aspirations for a healthier society in which morbidity and mortality from illness are contained and people are free to opt for a longer and disease-free life. A number of objectives were set, focusing on the collection of adequate evidence to support and substantiate my advocacy for the importance of

Wholistic[1] Nutritional Medicine as a fully fledged branch of Modern Medicine in the fight against the devastating effects of chronic disease on humanity.

The aims analytically:

1. **To underline the importance of Nutritional Medicine in health and disease and to provide adequate evidence for the reasons for which its role as a vital partner of 21st century Medicine, particularly in the prevention and treatment of chronic disease, should be acknowledged.**
2. **To enlighten current perceptions on important issues related to how health can be optimised through the effective application of the principles of Nutritional Medicine**
3. **To assess the possibility of Nutritional Medicine to be included in the National Health System, with particular emphasis to the case of Cyprus.**
4. **To provide evidence-based recommendations on the role of Nutritional Medicine, within a patient- rather than disease- centred healthcare system, which emphasises on prevention rather than treatment.**

1.3. THE OBJECTIVES

1.3.1. OBJECTIVE ONE-The context and conditions

To investigate and critically evaluate the context and conditions, in the western world generally and in Cyprus particularly, within which Nutritional Medicine attempts to secure a respectable position along the spectrum of contemporary medical practice. To evaluate public and political perceptions in Cyprus on these issues

Placing Nutritional Medicine into context was an important prerequisite for the materialisation of the aims of this project. This objective was guided by the imperative to dig into the facts and realities that govern the provision of

[1]Preference is given to the use of the word 'Wholism' instead of 'Holism' -a term commonly used to denote wholistic approaches- to avoid any connection with divine or spiritual concepts. As its title denotes, the Wholistic Nutritional Medicine Society of the UK adopts the same policy. For accurate referencing, however, the term 'Holism and Holistic' is used often in the text when quoted from other authors.

healthcare, as understood and presented by academic, political and medical actors in the national and international arena, and as they are established in the perceptions of the public; to gain adequate insights on perceived problematic situations that affect the provision of healthcare in Cyprus; and to evaluate the extent of knowledge and belief on nutritional means of treatment generally, and Nutritional Medicine particularly, as a scientific evidence-based method of prevention and treatment of disease.

1.3.2. OBJECTIVE TWO- Contemporary Healthcare

To critically investigate evidence on the role of Contemporary Healthcare in the rising incidence of chronic disease and to evaluate the extent to which the desires/ expectations/ needs of people are met. To evaluate public and political perceptions in Cyprus on these issues

The essence of this objective was to critically evaluate available, and create new, evidence on a number of critical issues regarding the provision of healthcare including: the reasons hiding behind the rising incidence of chronic disease; the extent to which the current settings in the provision of healthcare optimise the health of people and if their expectations and needs are met; and the role of the various influences on the evolution of medical thought throughout the ages

1.3.3. OBJECTIVE THREE-Nutritional Medicine

To examine and critically evaluate evidence on the effectiveness of Wholistic Nutritional medicine in both the prevention and treatment of chronic disease. Also to investigate the extent to which evidence-based nutritional interventions are effectively applied within the current setting of the provision of healthcare and if contemporary healthcare professionals are adequately educated and trained to apply these, through their classical medical education and clinical training. To evaluate public and political perceptions in Cyprus on these issues

The aim was to build adequate evidence to support the effectiveness, as well as the scientific basis, of nutritional interventions in the prevention and therapy of chronic disease through: critical investigation and evaluation of available evidence-based knowledge in literature on the role of the essential nutrients –which the body receives primarily from nutrition and secondarily through other lifestyle-related processes– as indispensable co-factors in the metabolic biochemical processes of the body cells; identification of a considerable volume of scientific studies, such as experiments, clinical trials, epidemiological and observational studies on the successful use of nutritional means and lifestyle changes in the treatment of chronic disease; and evaluation of evidence on the extent to which evidence-based nutritional interventions are effectively applied within the current system of healthcare and whether contemporary healthcare professionals are adequately educated and clinically trained to apply these. In addition to create new evidence on public and political perceptions on above issues.

1.3.4. OBJECTIVE FOUR-Regulation

To investigate whether and how the profession of Nutritional Medicine (or Therapy) is currently regulated in other European countries and to evaluate the extent to which Nutritional Medicine could be accepted for inclusion in the National Health System of Cyprus and, if not, the reasons for this.

The aim of this part of the research was to investigate how regulation of Nutritional Medicine (or as otherwise termed Nutritional Therapy) in countries of the European Union occurs, and through a phenomenological approach to research, to evaluate the circumstances at the political, professional and public level regarding regulation in Cyprus. Furthermore, to identify how the commodities of power and the roles in the different areas of action are distributed within the wider health sector, as perceived by the politicians and the public.

1.3.5. OBJECTIVE FIVE-Dissemination

To identify and promote the most effective and influential ways to disseminate the results of this research placing public health at the centre of all actions

There is no doubt that change in prevailing mentalities should be a prerequisite for the accomplishment of the ultimate aims of this action research. This was considered as one of the most difficult to achieve objectives, since firmly established beliefs-often highly dogmatic- and convictions unchallenged for several generations, cannot be uprooted from one day to the other. The essence of this task was based on the need to search for ways by which the findings of this research would be forwarded, in the most convincing and persuasive manner, to those having the power to contribute to a change in the current establishment of the provision of healthcare of Cyprus, targeting not only the key players of the academic, political, and medical arena, but also the opinion of the public. The aims were: to enlighten current perceptions on critical issues related to health and wellness in Cyprus; to provide evidence-based recommendations for a more patient- rather than disease-oriented healthcare system which emphasises the role of diet and lifestyle in the prevention of illness and the maintenance of health; and to propose the inclusion of Nutritional Medicine in the National Health System, aiming at the optimisation of the health status of Cypriots.

1.4. ETHICAL ISSUES/WORKING AS AN INSIDER RESEARCHER

Ethical issues were among the primary concerns for this research, despite the fact that there was no recruitment of patients. A primary consideration had to do with a number of problems existing in my area of research, including an age-long antagonism, and an, in many ways, hostility, between the so-called

'conventional' and 'alternative' practitioners. The need for an amicable and conciliatory approach, excluding defensive methods was a major commitment I had to make to myself. In addition all measures were taken to avoid any reference that could, in any way, reveal identities of my patients and any cases that entailed such a danger were not used. Furthermore, the informed written consent for the use of this information was obtained by all patients (*as advised by the representative (Member of the Board) of the Committee of Bioethics*).

1.5. THE RESEARCH

This Action Research took place in Cyprus, with reference to the worldwide scope of medical activity, encompassing four different data collection techniques.

1.5.1. Review of relevant literature

An extensive review of literature was undertaken in search of adequate evidence to support and promote the aims and objectives of this research. The inquiry extended, both in the depth and breadth of time, into a number of areas considered as, directly or indirectly, influencing, in different ways – philosophically, politically, socially and economically- the present and the future of the provision of healthcare and its consequences on public health. Retrospection into the epistemologies that supported medical practice throughout the ages was considered essential, within the context of the investigation of the causes hidden behind the rising incidence of chronic disease and the declining values of Healthy Life Expectancies among people.

1.5.2. Methodology

A critical examination of a number of methods of medical research was carried out in order to identify those approaches that would produce results of the highest possible validity and reliability that could be effectively used for the promotion of the aims of this action research. The necessity for a more profound contemplation of available methods emerged from the fact

that the health sector represents an area of extremely high complexity in which social and human elements critically interact and intermingle with political and economical components. An analytical review of the different methodologies, demonstrated an extensive array of studies, carried out through both quantitative and qualitative approaches. These include laboratory experiments, clinical trials, literature reviews, surveys, case studies and interviews. Four different methods of inquiry were selected, on the basis of the specific characteristics, the nature, and the politics of the health sector. These were: 1) Literature review; 2) Interviews; 3) Survey; and 4) Analysis of Case Studies from clinical practice.

1.5.3. Project activity

Literature review represented an analytical approach into the academic perspective and extended into a number of areas, in an attempt to explore and investigate the context and conditions within which contemporary healthcare is provided, as well as the different political, economic and social influences on it, with special focus on the case of Cyprus.

Interviewing a number of key actors, involved -directly or indirectly- in the decision- and policy-making process of the health sector, was one leg of the phenomenological approach to research, the other being the Survey. The interviews were subjected to discourse analysis to identify the hidden opinions, beliefs, dogmas and prejudices of those having the power to contribute to a change in the Health Sector.

The Survey was conducted with a nationally stratified sample, with the support of the University of Nicosia. The aim was to generate, within the context of a phenomenological approach to research, both quantitative information -such as public opinion statistics on different issues related to the provision of healthcare, as well as the diet and lifestyle habits of Cypriots-, and qualitative data -such as perspectives, values, and convictions.

Analysis of Case Studies: Qualitative, and where possible quantitative, analysis of a number of randomly selected Case Studies from my Clinical Practice as a Nutritional Medicine Practitioner was carried out. This part of the research was considered a valuable source of clinical information, on patients' nutritional therapies, and of different themes such as: patient views and beliefs before and after treatment; who and why resort to non-conventional therapies; opinions on the degree of success of treatments of specific chronic health problems.

1.5.4. Project findings

A significant volume of, both quantitative and qualitative, data was generated through the abovementioned methodologies. The knowledge gained from the review of literature was huge and invaluable, providing important insights into the academic, official, and political perspective on several issues related to the provision of healthcare, including the reasons hiding behind the rising incidence of chronic disease and the role of different actors in this . This knowledge was further expanded and updated from the results obtained through the other methodologies. The Interviews, transcribed and subjected to discourse analysis, revealed the political side of the provision of healthcare and the underlying causes of a number of problems related to the wider Health Sector. The Survey was an important source of new information on the diet and lifestyle habits of Cypriots, their therapeutic preferences, their needs and expectations, the extent of use of conventional and alternative means of treatment, and their beliefs and convictions regarding their health. The analysis of Case Studies from my clinical practice represented a good part of work-based evidence, which provided additional grounds for my arguments as an advocate of Nutritional Medicine.

All findings are presented in this report, in CHAPTER 5 and, in a different form, are also included in a book which was prepared to be used as the EVIDENCE OF ACHIEVEMENT of this action research and as a tool of

dissemination of the results. A summary of the results, linked to recommendations are also included in the last Chapter of this report: Chapter 7. Conclusions/Recommendations

1.5.5. Conclusions/Recommendations

A summary of the findings of the research are also included in **Chapter 7: Conclusions/Recommendations of the Project Report,** to support recommendations, and in the **Epilogue of the EVIDENCE OF ACHIEVEMENT** as part of the conclusions.

2. REVIEW OF LITERATURE

NOTE

Below is only a summary of the literature review. A more expanded account is included in the EVIDENCE OF ACHIEVEMENT, by Nitsa Kiliari (2011), prepared as a partial fulfilment of the requirements of Middlesex University for the award of a Professional Doctorate Degree in Nutritional Medicine. The EVIDENCE OF ACHIEVEMENT is an integral part of this Report and should be consulted alongside with the Report. Additional references to particular Parts/Chapters of the EVIDENCE OF ACHIEVEMENT are included in the text accordingly

2.1. INTRODUCTION

An extensive review of a volume of publications threw light into the context and conditions governing the provision of healthcare and revealed the influences –philosophical, economic and, not infrequently, political– which formed medical thought throughout the ages. The research expanded into both the depth and breadth of time and within several areas, directly or indirectly related to the wider health sector. The epistemological roots and the pathway of evolution of scientific medicine from antiquity until the present times, were critically investigated through different, often diametrically opposite, academic perspectives. The writings of several authors were reviewed, expanding from the first thinkers of the ancient Greek territory, through the Byzantine and other scholars of the Middle Ages, the intellectuals of the Scientific Revolution, the Renaissance, and the Enlightenment, and towards the unprecedented scientific achievements of Biomedicine of the last centuries. (*Abercrombie et al., 1994; Adams 1904; Arieti 2005; Bekyarova et al., 2009; Bennett 2001; Berlivet 2008; Bernstam et al., 2009; Blackburn [1996; 2005]; Bodenreider & Burgun 2008; Bullock et al 1998; Capra 1982; Carr 1920; Carriero et al. 2005; Chow et al 2008; Cordell 1904; Cozzens 2010; Cushman & Hoffman 2004; Drummen 2010; Einstein & Infeld 1938; Engel, 1977; Garland 1928; Garrison 1929; Geanakoplos 1966; Illich 1995; Jackson 2002; Jary & Jary 1995; Kant 2004; Kempf 1905; King 2001; Krishnan 2010; Ligeros 1937; Magee 2005; Mallinger 1998; Mbitsakis 1978; Plaskettt 2004i; Proby 1975; Quirke & Gaudilliere 2008; Rae 1986; Reid 1996; Reitman & Shadt, 2007; Scarborough 1985; Seelig, [1905; 1908]; Smart 2000; Temkin 1962; The Rector et al 2009; Trivieri & Anderson 2002; Valier & Timmermann 2008; Vallance 1990; van Weel & Rosser 2004; Vesey & Foulkes 1990; Vorning 1997; Vryonis 1989; Wadhwa & Kapila 2008*).

A number of treatises were studied in their original ancient Greek language - mainly Ionian[1]- and were compared with the translations and comments by Greek and English commentators. (*Armstrong 1935[i-ii]; Balme 1991; Brock 1916; Brock 1923; Forster 1961[i-ii]; Goold [1916; 1928]; Goold 1961[i-iii]; Goold 1988[i-ii]; Goold & Balme 1991; Goold & Smith 1994; Goold & Potter 1995; Hatzopoulos 1992[i-xxii]; Henderson 1923[i-ii]; Henderson [1931; 1933; 1970]; Henderson 1935[i-iii]; Jones 1923[i-ii]; Jones 1931; Lypourlis [2000 & 2001]; Peck [1942; 1961; 1965; 1970]; Pentzopoulou & Petrou 2001; Potter 1988[i-ii]; Smith 1994; Tredenick [1933; 1935]; Withington 1928*). The research transcended the boundaries of the Western world, in search of other forms of medicine prevailing in traditional societies, (*Yu-Lan 1976, p.2; Jeste & Vahia 2008; Flood 1996 ; Smart 2000; Reid 1996 ; Craik, 2009*). Within the same area of inquiry the extent to which, and the reasons, people resort to 'Alternative', 'Traditional' or other, generally termed 'Non-Conventional', Medicines (NCMs), were examined. Other areas investigated included: the methods used for medical research, their validity and reliability in supporting medical practice, as well as the extent to which therapeutic nutritional interventions are effectively applied within the contemporary setting of healthcare. The conditions -medical, political, economic and social- which govern the provision of healthcare in Cyprus, were also critically evaluated through a review of available literature.

A major outcome of the review of literature was the identification of a worldwide disquiet, both at the national and international level, for the rapid increase of the incidence of chronic disease, amongst increasingly younger people, and a rising awareness among decision makers for the need for radical changes in the area of the provision of healthcare, (*WHO 2002; 2002iii; 2003; 2003i; 2003iii; 2004i; 2004ii; 2005; 2005i; 2007i; 2007ii; 2007ix; 2008; 2008iv; EU 2005; Davis & Wagner 1999; Mathers & Loncar 2006; Woolf & Akesson 2001; Zimmet 2000; Wilt et al., 1998; Drewnowski 2009; Evans et al., 2001; Plaskettt 2004* (*i-xv*)*; Popkin 2009; Shepherd 2009; Goode & Mavromatas 2008; Yach et al., 2004; Solomons 2009; Barret et al., 2004*)*, and at the local* (*Cyprus level*) *Antoniadou 2005; Golna et al., 2004; Zachariadou et al., 2008; Tyrovolas et al., 2009; WHO 2006iii, 2006iv, 2007xi, 2008; Middleton et al., 2008; Borg et al., 2006; Lazarou et al., 2008; Savva et al., 2005 and 2007;.Harris 2009;*). An important issue, recurrently highlighted by different reports, relates to the low grading of Healthy Life Expectancy indicators for most of the Western World countries. The term 'Healthy Life

[1] Ionia, today known as Minor Asia in Eastern Mediterranean, was the cultural centre of the ancient Hellenic world were scientific medicine was born

Expectancy' (HALE) -substituting that of 'Life Expectancy' (LE)- seems to be now more representative, demonstrating that people live a significant part of their life below optimum health, (*Evans et al., 2001, WHO 2006iv; WHO-Europe 2008; Shepherd 2009*). New terms, such as DALYs (Years lost from Premature Death plus the Years lived with a Disability) and YLD (Years Lived in Disability), figure in most reports. The need for urgent action is stressed in order to contain the rapidly spreading pandemic of chronic disease, which is reported as a major cause of death and disability worldwide, occurring increasingly at lower ages and expected to increase significantly within the next couple of decades*, (WHO [2003i, 2003iii, 2004i. 2004ii, 2005i, 2006, 2006iii, 2006iv, , 2007, 2007i, 2007ii, 2007viii, 2007xi, 2008; 2008i, 2008i]; WHO Europe [2006, 2008, 2008i, 2008ii]; EU 2007ii; Evans et al., 2001; Yach et al., 2004; Wolf & Akesson 2001; Mathers & Loncar 2006; Davis & Wagner 1999; Lopez et al., 2006; Ramsey et al., 2008; Zimmet 2000; Zarocostas 2010).*

Cyprus does not represent an exception, following the trends towards an aging population with less than optimum health. In the World Health Organisation reports, Cyprus figures at the very bottom of HALEs (Healthy Life Expectancies) in Europe, (*WHO 2006iv; WHO-Europe 2008; Cyprus Statistical Service 2006*) despite the high Life Expectancies reported by the Cypriot Ministry of Health (*MOH 2008*). Apparently, Cypriots lose an average of 9.7 years of their lives to illness, which is the 12.5% of their lives, and this loss is more than two years more than the Eur-A[1] average (*7.3 years*) and the Eur-B+C[2] average (*7.6 years*) (*WHO 2006iv, fig. LE & HALE, p.5)*. This evidence is not included in the official reports by the Cypriot Ministry of Health which speak of a 'high level of health' among citizens 'favourably compared with the other developed countries', (*MOH 2008, p.14).* Worth noting, however, is that further below in the same report, the Ministry of Health admits that cardiovascular disease is a major cause of death among Cypriots accounting for 40% of deaths in Cyprus (*MOH 2008, p.15*). Other researchers also

[1] Eur-A, comprising 27 countries in the WHO European Region with very low child and adult mortality: Andorra, Austria, Belgium, Croatia, **Cyprus**, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom; 27 countries) *WHO 2006iv*)

[2] Eur-B+C, comprising 26 countries in the Region: Eur-B)17 countries with low child and adult mortality: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia, Kyrgyzstan, Montenegro, Poland, Romania, Serbia, Slovakia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Turkmenistan and Uzbekistan) and Eur-C)9 countries with low child but high adult mortality: Belarus, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, the Russian Federation and Ukraine, (*WHO 2006iv*)

report very unhealthy diet and lifestyle habits for Cypriots, with tobacco consumption at levels 68% higher than the EU average and with Cypriots having gradually substituted their health Mediterranean diets for unhealthy readymade food high in animal protein, saturated fat and cholesterol (*Golna et al., 2004*). Cyprus appears to be included within the high risk regions for cardiovascular disease, with Cypriot women occupying the second highest position in deaths from heart disease in Europe; cancer killed 14.1% of Cypriots in 2005 and it is expected to increase in the next two decades; 62.9% of Cypriot men and 46% of women suffer from high cholesterol; more than one fifth of the population (22.6%) suffer with high blood pressure; and neuropsychiatric disorders appear as the second highest cause of disability among Cypriots, accounting for 19.4% of total DALYs for females and 15.8% for males. In addition levels of obesity, particularly among men, are significantly higher than the other EU countries. Researchers show that almost one in two adults and one in four preadolescent children are overweight, (*WHO 2006iv, [fig. LE & HALE, p.5]; WHO 2007xi [fig,. p1]; Golna et al., 2004; Savva et al., 2007; Lazarou et al., 2008; WHO 2008; Zachariadou et al., 2008; Antoniadou 2005; MOH 2008, p.15; WHO 2006iv [table, p.6]; Golna et al., 2004 [fig 4, p.9 & fig.7, p. 14]; WHO 2007xi [fig. p.1]; WHO 2008)*. Strong positive correlations between obesity and chronic disease were also evident in literature, (*Nguyen et al., 2009; Smith et al., 2009; PSC 2009; Coogan et al., 2009; Parsons et al., 2009; Elsayed et al., 2008; Lemieux et al., 2007; Blackburn et al., 2009*), without of course failing to acknowledge the fact that not all chronic diseases emerge from obesity, (*Real et al 2006; Nikolakakis et al 2008; Yanik et al., 2009; Wise et al. 2005; Schwartz et al 2000; Foster et al 2008; Elsayed et al 2008*).

Socioeconomic parameters were also found to be strong predictors of most common chronic diseases highlighting the political side of disease. Research demonstrates that the incidence of chronic disease, together with its attendant consequences, appears to be much higher amongst the most disadvantaged groups of societies. There appears a consistent association between socioeconomic status and disease mortality and morbidity, (*WHO [2002iii, 2004ii, 2005i, 2008]; Govil et al. 2009; Rait et al., 2010*). Common, widespread chronic health problems such as cardiovascular disease, dementia, and diabetes are especially prevalent

among people with low incomes and low education, (*WHO [2007ix, 2008iv, Govil et al 2009; Drewnowski 2009; Bacon et al., 2009; Rait et al., 2010*). Researchers draw attention to the role of social inequalities and inequitable access to healthy foods, claiming that people are forced by state policies and imposed economic models to resort to cheap and unhealthy foods, (*WHO [2002iii, 2004ii, 2005i, 2008]; Govil et al., 2009; Rait et al., 2010; Drewnowski 2009; WHO [2007ix, 2008iv; Bacon et al., 2009; Goode & Mavromatas 2008*).

For a more expanded account of the review of literature please refer to:
THE EVIDENCE OF ACHIEVEMENT
Part I: *IDENTIFYING THE PROBLEM*
Chapter I: *Health and Disease Facts*
Chapter II: *Perceptions of Health*

2.2. THE DIFFERENT TRADITIONS OF MEDICINE

Two major healing traditions appear to have supported world medical practice throughout the ages: **the Eastern**, influenced by the Asian-Pacific philosophy closely dependent to religious schools of thought such as Buddhism, Taoism and Hinduism; and **the Western**, underpinned by the Greco-Roman philosophy and quite independent from religious and mystical influences, (Zunin & Wong 2006; Pizzorno & Murray 2007-2011) (*this of course being true only before the discovery of the new twentieth century physics,* (Capra 1991)). Literature abounds of terms used to denote therapeutic approaches based on different conceptual frameworks of medical thought. Some of the most frequently used are: **Conventional, Modern, Biomedicine, Allopathic, Biopsychosocial, Alternative, Complementary, Integrative, Nutritional, Traditional, Holistic[1] or Wholistic, Natural, Naturopathy, Homeopathy, Orthomolecular, Biological, Functional, Bioelectromagnetics, Reiki, Ayurvedic, Unani Tibb and so on. (***Balch & Balch 2000; Ballentine 1978; Capra 1982; Connelly 1994; Cushman & Hoffman 2004; Tovey et al., 2005; Sheenan & Hussain 2002; Zarcone 2003; Critchley et al., 2000; Galland 2005; Garrow et al., 2000; Glenville 2001; Goldberg et al., 2002; Hyman et al., 2005; Jamison 1999; Jones 2005; Jones et al., 2005; Jones & Quinn 2005; Lamb 2005; Proby 1975; Liska et al., 2004; Micozzi 2001; Mitchell & Cormack 1998; Murray et al., 2005i; Pfeiffer 1987; Pizzorno & Murray (2007-2011); Plaskettt 2004 (i-xv); Quinn & Jones 2005; Rapgay 1996; Reckeweg 1991; Roy 1999; Schmid 1991;*

[1] The word 'Holistic', commonly used to denote wholistic approaches, is quoted as written by Goldberg et al.,.,)2002)

Sudak 2005; Thiel 2000; Trivieri & Anderson 2002; Vithoulkas 1980; Werbach & Moss 1999; WHO 2003ii; Lypourlis 2000; Hatzopoulos 1992i);

In the western world the prevalent academic view classifies all therapeutic traditions under two major categories:

1. **Conventional** or **Modern Medicine** or **Allopathic Medicine** or **Biomedicine** widely accepted as the dominant medical system in the contemporary western world for the last three centuries.
2. **Non-Conventional (NCMs) or Complementary and Alternative medicines (CAM)** the umbrella for all therapies that are considered *'non-biomedical'* (*including Traditional Medicine*).

2.2.1. The Evolution of Medical Thought

Retrospection into the history of medicine provides valuable insights on how scientific medical thought developed, and reveals the epistemological framework which supported medical practice throughout the ages. The influence of philosophy into all fields of science, including medicine, is widely recognised by the academic world, (*Arieti 2005; Armstrong 1935[i-ii]; Balme 1991; Bennett 2001; Blackburn [1996;2005]; Brock 1916; Brock 1923; Capra 1982; Craik, 2009; Einstein & Infeld 1938; Flood 1996; Forster 1961[i-ii]; Goold & Balme 1991; Goold & Potter 1995; Goold & Smith 1994; Goold [1916; 1928]; Goold 1961[i-iii]; Goold 1988[i-ii]; Hatzopoulos 1992[i-xxii]; Henderson [1931; 1933; 1970]; Henderson 1923[i-ii]; Henderson 1935[i-iii]; Jeste & Vahia 2008; Jones 1923[i-ii]; Jones 1931; Kant 2004; King 2001; Ligeros 1937; Lypourlis [2000; 2001]; Magee 2005; Mallinger 1998; Mbitsakis 1978; Peck [1942; 1961; 1965; 1970]; Pentzopoulou & Petrou 2001; Potter 1988[i-ii]; Reid 1996 ; Smart 2000; Smith 1994; Tredenick [1933; 1935]; Vallance 1990; Vorning 1997; Vryonis 1989; Withington 1928; Yu-Lan 1976, p.2*). Therefore, no investigation into the roots of any discipline can be considered valid and reliable if it fails to take into account the epistemological imprints of particular philosophical values and doctrines. Philosophy in general, and epistemology[1] in particular, provides the framework, within which new knowledge is constantly built, debated, disputed, discredited, and rebuilt, and represents the 'watch dog' against any attempt to restrict this knowledge within taken-for-granted boundaries.

[1] Epistemology: derived from the Greek word επιστήμη (episteme)=science, deals with the nature of science and knowledge (Arieti 2005)

History informs us that along its pathway of evolution, from its genesis around the sixth century B.C. in the Eastern region of the Mediterranean until the present time, scientific medicine swayed under the influence of often diametrically opposite paradigms. The philosophical doctrines of the pre-Socratic philosophers of ancient Ionia of Greece, a few centuries B.C., were further developed and expanded by Plato, Aristotle, Hippocrates, and Galen, while Hippocratic wholistic medical thought was challenged by the medical school of Cnidus with its categorization of diseases, in the fifth century B.C., and the anatomical school of Alexandria with its emphasis on the constituent parts of the body, in the third century B.C. After several centuries of scientific apraxia, following the collapse of the Roman Empire, scientific medical thought revives in the Byzantium which appears to have had a major contribution to the so called 'medieval awakening' and a significant influence to the medical development that follows. The doctrine that only *observation* and *experience* can provide us with reliable and valid information about the world prevails over *logos* (reason) during the transitional period extending from the Dark Ages to the Scientific Revolution, and widely known as the Renaissance. From this time onwards medical thought demonstrates significant developments, based on the new discoveries by medical scholars which brought down Galenism and its anatomical errors. A prominent figure of that time was William Harvey an English physician and scientist, considered as the founder of Modern Medicine. Harvey's new discoveries provided the basis for a new epistemology of medicine, the widely known today as Biomedicine or Modern Medicine, which is currently the prevalent medical system in most of the western world. However, researchers highlight the fact that medical scientific thought would not have reached the unprecedented development evident today without the significant contribution of the theories of two of the most important figures of Scientific thought: Rene Descartes (1546-1650), a French mathematician destined to be named by subsequent generations the 'founder father of modern philosophy', and Isaac Newton (1642-1727), a highly talented man of

exceptional intelligence, at the same time a physicist, mathematician, astronomer, alchemist and philosopher.

The advent of the Enlightenment in the sixteenth century establishes the onset of an epoch of exceptional intellectual activity, followed by a period of an unprecedented development in all fields of medical science and technology. During the last four centuries a number of paradigms, including rationalism, materialism, empiricism, realism, idealism and relativism have antagonised for the support of scientific thought, however, positivism seems to have been charged as the major influence on contemporary medical research and practice. Positivism, which has its roots in the nineteenth century positivist framework of the French philosopher Auguste Comte, represents a movement towards the identification of a scientific basis for philosophy and a rejection of metaphysics. Positivism was handed over the scytale by empiricism, which prevailed, especially in Britain, in the seventeenth and eighteenth centuries, in an effort to discredit rationalism. In the field of medicine, Hippocrates was the major exponent of rationalism, followed by Galen in the beginning of the first millennium. Positivism claims to achieve objectivity through standardisation and uses deductive reasoning by appeal to universal laws. (*Arieti 2005; Armstrong 1935[i-ii]; Balme 1991; Bennett 2001; Blackburn [1996;2005]; Brock 1916; Brock 1923; Capra 1982; Craik, 2009; Einstein & Infeld 1938; Flood 1996; Forster 1961[i-ii]; Goold & Balme 1991; Goold & Potter 1995; Goold & Smith 1994; Goold [1916; 1928]; Goold 1961[i-iii]; Goold 1988[i-ii]; Hatzopoulos 1992[i-xxii]; Henderson [1931; 1933; 1970]; Henderson 1923[i-ii]; Henderson 1935[i-iii]; Jeste & Vahia 2008; Jones 1923[i-ii]; Jones 1931; Kant 2004; King 2001; Ligeros 1937; Lypourlis [2000; 2001]; Magee 2005; Mallinger 1998; Mbitsakis 1978; Peck [1942; 1961; 1965; 1970]; Pentzopoulou & Petrou 2001; Potter 1988[i-ii]; Reid 1996 ; Smart 2000; Smith 1994; Tredenick [1933; 1935]; Vallance 1990; Vorning 1997; Vryonis 1989; Withington 1928; Yu-Lan 1976, p.2*)

For a more expanded account of the review of literature please refer to:
THE EVIDENCE OF ACHIEVEMENT

Part II: *THE EVOLUTION OF MEDICAL THOUGHT- A critical historico-philosophical review*

2.2.2. Non-Conventional Medicines: Complementary / Alternative / Traditional Medicines

The terms *CAM* (*Complementary and Alternative Medicines*) or *NCMs* (*Non Conventional Medicines*) are usually used as an umbrella under which all healing traditions that are not Conventional or Biomedical can be accommodated. However, these definitions are much debated in literature, (*Vickers & Zollman 1999 ; DiGianni et al., 2002; Nahleh & Tabbara 2003; Mann et al.,, 2004; Tovey et al., 2005; Vogel et al., 2005; Hakobyan et al., 2006; WHO 2003ii; Cooper et al., 1998; Chang et al., 2007*). In fact, only the term *Alternative* can be more precisely defined, as it denotes all therapeutic approaches that reject the classical Biomedicine. On the contrary, the term *Non-Conventional*[1] includes any approaches that are not Biomedical (Conventional), not however essentially *Alternative, as* they might cooperate with Biomedicine as is the case of *Complementary* approaches. The term *Complementary*, has more obscure barriers stretching erratically between the *Conventional* and the *Alternative*. The US National Institutes of Health classify *Complementary* therapies as those which complement Conventional medicine, in some way, while *Alternatives* are those that substitute the Conventional, (*DiGianni et al., 2002*). The *CAM* definition was coined at a 1997 conference of the United States Office for Alternative Medicine of the National Institutes of Health, -now known as the US National Centre for Complementary and Alternative Medicine (NCCAM) - and subsequently adopted by the Cochrane Collaboration and the Ministerial Advisory Committee on Complementary and Alternative Medicine (*di Sarsina 2007*). According to this definition:

> *'Complementary and Alternative Medicine* (*CAM*) *is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being.' (Di Sarsina 2007)*

[1] The term NCMs (Non-Conventional Medicines) is often used in the Report as a preferred term to denote all Complementary and Alternative Medicines (CAM). The term CAM is only used when is included in quoted texts by other authors

The US White House Commission on Complementary and Alternative Medicine Policy (2002) defines it as 'a group of medical, health care, and healing systems other than those included in mainstream health care in the United States' (*Cushman & Hoffman 2004*). Conventional definitions view *CAM* as ' practices that are not accepted as correct, proper, or appropriate or not in conformity with the beliefs or standards of the dominant group of medical practitioners in a society', and as complementing mainstream medicine 'by contributing to a common whole, by satisfying a demand not met by orthodoxy', (*Vogel et al., 2005*)

The list of CAM healing philosophies and therapeutic approaches is long and changes continuously, as those therapies that are proven safe and effective are adopted by conventional medicine while new practices are incorporated, (*Cushman & Hoffman 2004*). Just to mention a few: *Chiropractic Medicine, Homeopathic medicine, Naturopathic medicine, Traditional Chinese medicine* (e.g., acupuncture, Chinese herbal medicine), *Orthomolecular medicine* (*e.g., megavitamin therapy*), *Individual Biological Therapies* (e.g., shark cartilage, bee pollen), *Ayurvedic medicine, Yoga, Herbal Therapies, Special Diets* (e.g. macrobiotics, extremely low-fat or high-carbohydrate diets), *Bioelectromagnetics, Reiki, Alexander method*, (*SOURCE: White House Commission 2002*)[1].

Many of those unconventional therapeutic practices that qualify as 'CAM' have strong links with the Eastern Healing Tradition and Asian-Pacific philosophical and religious influences. They are grouped under the so-called Traditional Medicine, which appears to dominate the primary health care of most traditional societies, in which a major part of the Earth's population lives, (*WHO 2000; 2003ii;*). The World Health Organisation estimates that up to 80% of indigenous people use traditional forms of medicine. A few of the most important schools of traditional medical thought include: *Traditional Chinese*

[1] Quoted in Cushman & Hoffman 2004

Medicine (TCM), Traditional South Asia Medicine-Unani[1] *Tibb, Traditional African Medicine (TAM), Tibetan Medicine (Dong & Phillips 2008; Chen 2008; Critchley et al., 2000; Tang et al., 2008; Sheenan & Hussain, 2002; Welchhoff 2006; Zarcone 2003; Juntunen et al., 2000).*

For a more expanded account of the review of literature please refer to:
THE EVIDENCE OF ACHIEVEMENT
For Traditional Medicines
Part II: THE EVOLUTION OF MEDICAL THOUGHT-A critical historico-philosophical review
Chapter II: *The Eastern Tradition: An overview*
For Complementary & Alternative Medicines
PART V: PUSHING FORWARD THE BOUNDARIES OF HEALTHCARE
Chapter I: *A New Philosophy in the Provision of Healthcare*

2.3. NUTRITIONAL MEDICINE

Nutritional Medicine (NM) was introduced as a therapeutic discipline in the universities of the western world during the last decades of the twentieth century, however its practice is traced long before, from antiquity until about the turn of the nineteenth century. As it appears in literature, NM is a patient-centred approach, with influences from wholistic medical philosophies such as those espoused by the ancient Greeks Hippocrates and Galen , *Brock 1916 ; Goold [1916; 1928; 1988 (i-ii);]; Goold & Smith 1994; Goold & Potter 1995; Henderson [1923 (i-ii); 1931]; Jones 1923 (i-ii); 1931]; Potter 1988(i-ii); Smith 1994; Withington 1928; Hatzopoulos 1992(i-xvii);; 1931]; Lypourlis [2000; 2001]; King 2001; Ligeros 1937; Arieti 2005; Vryonis 1989*). It is based on a profound knowledge of the medical sciences of physiology, biology, anatomy and, most importantly, nutritional biochemistry. It focuses particularly on the prevention of disease and the treatment of chronically ill patients, emphasising on the role of diet and lifestyle in both areas, (*Plaskettt 2004* (*i-xv*); *Jensen 1978; Balch & Balch 2000; Pizzorno & Murray (2007-2011); Goldberg et al., 2002; Werbach [1996, 1997, 1999*(*i-ii]; Garrow et al., 2000*). Patients are treated as biochemically unique individuals in consideration of their distinct genetic inheritance, their constant interaction with multiple environmental factors, and their functioning through intricately complex and interrelated physical, mental and emotional processes occurring every moment at different

[1] Unani or Yunani =Ionian (ancient Greek territory, now known as Minor Asia); Tibb: medicine in Arabic. Also known as Islamic Tibb

levels within their bodies. The Nutritional Medicine diagnosis focuses on the deeper causes that lie beneath the symptoms. . Similar symptoms between two patients, may not always have the same deeper causes and as a result they may not necessarily receive the same treatment, . Symptoms may often represent manifestations of hidden cellular deficiencies or biochemical imbalances, generally termed by NM scholars, as *Chronicity,* (*Plaskettt 2004* (*i-xv*)*;, Reckeweg 1991; Proby 1975*). Plaskettt defines *Chronicity* as the 'sum total of the body's present and historical toxic burden, the residual cellular and tissue damage it has caused, and the resulting degree of underfunction or malfunction'. Nutritional medicine therapies employ dietary and lifestyle elements, often including nutritional supplements, otherwise termed *nutraceuticals*, as tools of treatment. In cases of serious chronic illnesses, Nutritional Medicine can have important contribution to the treatment of patients, through multidisciplinary approaches combining biomedical, nutritional, psychosocial and other interventions placing the benefit of the patient at the heart of all actions, (*IMF 2008; Jones et al., 2005; Pizzorno & Murray 2007-2011; Plaskett 2004[i-xv])*

The evidence from scientific research demonstrating the power of nutritional methods and means in the prevention and treatment of chronic disease is rapidly accumulating, *(Ames 2006; Ames 2010; Balch & Balch 2000; Baldewicz et al., 1998; Ballentine, 1978; Barbagallo et al., 2007; Beckett & Arthur 2005; Benton & Donohoe 1999; Benyon 1998; Bereswill et al., 2010; Bland [2002 and 2004]; Bodane & Brownson 2002; Bohager 2008; Bolland et al., 2010; Calvaresi & Bryan 2001; Carlsen et al., 2010; Cattaneo et al.,, 2001; Chakraborti et al., 2002; Chen et al., 2009; De Lau et al., 2006; De Roos et al., 2009; Duda et al., 2009; Elmali et al., 2007; Erasmus, 1993; Fairfield & Fletcher 2002; Fenech 2001; Ferguson 2009; Ford 2001; Forestier et al., 2008; Frederickson et al., 2005; Garland et al., 2007; Garrison 1982; Garrow et al., 2000; Gawande et al., 2008; Glenville [1997; 2001; 2005]; Goldberg et al., 2002; Gonzalez-Gross et al., 2001; Gorelik et al., 2003; Green & Miller 1999; Guarner 2007; Guerrero-Romero & Rodriguez-Moran 2005; Gurusamy et al., 2008; Hanaway 2005; Harper & Jacobson 2001; Hasler et al., 2000; He et al., 2011; Hennen 1999; Herbert 2000; Higdon 2003; Holmquist et al., 2007; Hudson & Murray 2011; Jensen 1978; Jha et al., 2010; Jia et al., 2010; John et al., 2010; Jones et al., 2005; Kale et al., 2010; Karunakaran et al., 2007; Kellof et al., 2000; Kidd 1996;Kim et al., 2004; Knekt et al., 2002; Kris-Etherton et al., 2002; Lakhan & Kirchgessner 2010; Lamson & Plaza 2002; Lassi et al., 2010; Leader & Leader 2006; Levin et al., 2006; Lewontin 2000; Ley 1998; Libby 2005; Linde et al., 1996; Lipton et al., 1979; Looijer-van Langen & Dieleman 2009; Lyon et al., 2005; Ma et al., 2005; Maczurek et al., 2008; Maes et al., 2009; Mandel et al., 2004; McCann & Ames 2009; McCarty [1981; 2000, 2000i]; McKay et al., 2000; McKenna et al., 2001; Meplan et al., 2007; Meydani 2001; Michaud et al., 2000; Molloy & Scott 2001; Muecke et al., 2010; Murray & Lyon 2003; Pizzorno &; Murray [2007-2011]; Pizzorno & Murray 1999; Murray et al., 2005i; Natural Medicines Comprehensive Database [1995-2011]; NIH et al., 2004; Obeid et al., 2007; Pan et al., 2009; Panayiotakos et al.,*

[2007i 2007ii, 2009]; Papathanasopoulos & Camilieri 2010; Parkes et al., 2008; Pfeiffer [1975; 1972; 1987]; Pittler & Ernst 1998; Pizzorno et al., 2002; Plaskettt 2004 [i-xv]; Polychronopoulos et al., 2008; Proby 1975; Puchau et al., 2009; Quillin & Quillin 2005; Radhika et al., 2002; Rayburn & Friedman 2010; Reckeweg 1991; Reid et al., 2003; Reznichenko et al., 2010; Rideout et al., 2008; Robinson et al., 1998; Romieu & Trenga 2001; Sahley & Birkner 2001; Salinthone et al., 2008; Schauss 2011; Scholle et al., 2009; Schurgers et al., 2007; Sharma et al., 2007; Showell et al., 2011; Silva et al., 2010; Simopoulos 2002; Singh & Das 2011; Singh & Jialal 2008; Smith et al., 1996; Song et al., 2006; Song et al., 2009; Song et al., 2010ii; Soo et al., 2008; Steinbrecher et al., 2010; Stoll 1998; Taylor et al., 2002; Tenenbaum et al., 2008; Tunon et al., 2009; Vauzour et al., 2008; Verhaar 2002; Vogel et al., 2005; Vosper 2009; Wang et al., 2001; Wang et al., 2010; Watts 1995; Weber et al., 1996; Wei et al., 2009; Weisburger 2000; Werbach & Moss 1999; Werbach & Murray 2000; Werbach [1996, 1997, 1999 2002]; Wilner 2005; Wilt et al., 1998; Witte et al., 2001; Yamori et al., 1992; Yamori et al., 2010; Yarnell 2000; Zhou et al., 2009; Zoccolella et al 2007)

In particular, there exists adequate evidence to support the theory that the body's endogenous defence mechanisms can be manipulated with elimination of the sources of oxidative stress, such as those related to diet, lifestyle and various social, emotional, and environmental exposures. As a general rule: a combination of a healthy diet containing as much as possible clean, unprocessed, and free from added chemicals food, as well as specific functional foods proved by scientific evidence for their antioxidant properties; a prudent lifestyle with adequate sleep, exercise, and avoidance of stress; minimum environmental exposure to toxins; and occasional intake of antioxidant nutritional supplements, when necessary (*as in cases of deficiencies or known exposure to toxicity*), may have tremendous beneficial effects on prevention of disease and maintenance of health and may often reverse the progression of specific diseases, (*Plaskett 2004; Jones 2005; Goldberg et al., 2002; Pizzorno & Murray 1999; Pizzorno & Murray (2007-2011);Liska et al., 2004; Werbach & Moss 1999; Werbach [1996, 1997, 1999 2002]; Balch & Balch 2000*). It is worth noting that Nutritional Medicine, particularly in the cases of serious *Chronicity*, requires strict adherence to specific dietary rules and very often the ingestion for high doses of nutritional supplements, not rarely for several months. Not all people are willing, and/or able to follow a proper nutritional therapy (*this issue is discussed also in Finding Five*).

A new wholistic approach, termed *Functional Medicine* (FM), which has emerged during the last decade, (*Levin et al., 2006; Bland [2002; 2005]; Liska et al., 2004; Jones et al., 2005; Lamb 2005; Liska 2005; Quinn & Jones 2005; Sudak 2005; Galland 2005; Hyman et al., 2005; IMF 2008*) appears to provide an effective solution for many cases, within the context of

the new philosophy of healthcare, by integrating Biomedicine with Nutritional Medicine (*often incorporating also other forms of complementary medicine*). Functional Medicine creates a focus on prevention integrating changes in diet and lifestyle with the use of the latest laboratory testing and other diagnostic techniques; and combines prescriptions of drugs with botanical medicines, supplements, therapeutic diets, detoxification programmes, or stress-management techniques, (*IMF 2008*). *Homeodynamics*, a basic principle of Functional Medicine, describes a range of continuously occurring metabolic and physiologic activities that enable an individual to adapt to changing circumstances, stresses and experiences. This is in contrast to the universally accepted, by both Conventional and Non-Conventional approaches, *Homeostasis,* which describes the balance of interconnected components that keep all physical and chemical parameters of the body relatively constant. The Functional approach is considered as an important development in the area of the provision of healthcare because it is thought to extend and enhance medical practice in both the Conventional and the Non-Conventional Sectors (*Levin et al., 2006*). (*Functional Medicine is discussed in more detail in the Evidence of Achievement, Part V, Chapter II*)

For a more expanded account on the review of literature please refer:

on Nutritional Medicine:
THE EVIDENCE OF ACHIEVEMENT

Part IV: *THE WHOLISTIC NUTRITIONAL MODEL OF MEDICINE*
Part VI: *NUTRITIONAL MEDICAL PRACTICE IN THE NEW PARADIGM*

on Functional Medicine :
THE EVIDENCE OF ACHIEVEMENT
Part V: *PUSHING FORWARD THE BOUNDARIES OF HEALTHCARE*
Chapter II: New Models of Healthcare Proposed

on Nutritional Research:
THE EVIDENCE OF ACHIEVEMENT
PART VII: NUTRITIONAL RESEARCH: A CRITIQUE

2.4. CONTEMPORARY HEALTHCARE-A Critical appraisal

This part of the literature review represented an attempt to dig into the deeper causes hiding behind the rising incidence of chronic disease and the reasons people resort increasingly to alternative methods in an attempt to find more effective solutions to their, often multiple, chronic health problems. Evidence demonstrates an inversely proportional relationship between the unprecedented development in all fields of the provision of healthcare and the optimisation of health; it appears that people, although they live longer, they do not however become healthier. It is worth noting that the majority of evidence accumulated on these issues represents reflective practice and self-criticisms emerging from within the medical community, as well as from official reports, (*Aasland & Forde 2005; Antoniadou 2005; Avogo et al., 2008; Baer 2007; Barrett et al., 2004; Beck et al., 2002; Bodane & Brownson 2002; Bolsin et al., 2005; Bursztajn & Hamm 1979; Calman 1994; Carlson 1979; Clark et al., 1999; Cushman & Hoffman 2004; Davis & Wagner 1999; Di Sarsina 2007; Engel 1977; Fallat et al., 2007; Fiqueredo 2009; Fletcher & Fairfield 2002; Golna et al., 2004; Gremy 1984; Gremy 2005; Hammer & Jonas 2004; Hampton 1997; Hark & Morrison 2000; Harris 2009; Hjortdahl 1992; Hyman et al., 2005; Joos et al., 2009; Kassirer 1998; Levinson et al., 1999; Linz et al., 2005; Mann et al., 2004; Mathers & Loncar 2006; Maxwell 2004; Mayou & Farmer 2002; McCarthy 1981; Mciness & Lawson-Brown 2007; Mechanic 1996; Meryn 1998; Micozzi 2001; Morrison 2000; Nahleh & Tabbara 2003; Paterson et al., 2008; Percy-Smith 2007; Rao et al., 2000; Rastegar 2005; Sault & Lochner 2005; Shai et al., 2001; Shepherd 2009; Smith 1998i; Smith 2007; Solomons 2009; Starfield 1980; Starr & Marsden 2008; Vickers & Zollman 1999; Vogel et al., 2005; Weeks & Wallace 2003; WHO [2002; 2002iii; 2005i; 2008]; WHO [2002ii, 2003i, 2003iii, 2004i, 2005. 2005i; 2006; 2006iv, 2007i, 2007ii, 2007ix; 2007xi, 2008, 2008i, 2008ii]; WHO Europe [2006, 2008; 2008i; 2008ii]); Woolf & Akesson 2001; Yach et al., 2004; Yarnall et al., 2003; Zachariadou et al., 2008; Zimmet 2000; Go et al.,2004)*

Critiques appearing in literature, focus particularly on the failure of contemporary health systems to respond effectively to the global epidemic of chronic disease and the rising numbers of patients with multiple chronic conditions. The responsibility of the politicians is highlighted by a volume of research which demonstrates strong socioeconomic elements in the rising incidence of chronic disease such as nutritional and lifestyle habits, environmental and behavioural factors, and several psychosocial parameters, such as income, education, housing, circumstances of work and others, (*Carlson 1979; Egeberg 1968; Engel 1977; McCarty 1981; Calman 1994; Zimmet 2000; Weisburger 2000; Shai et al., 2001; Fairfiled and Fletcher 2002; Elliot & Ong 2002; Yach et al., 2004; WHO [2002; 2002i, 2002ii, 2003; 2003i; 2004i; 2005i; 2006; 2007ii; 2007ix; 2008]; Percy-Smith 2007; EU 2005; Vogel et al., 2005; Schenk et al., 2008; Harris 2009;*

Popkin 2009; Martinez-Gonzalez et al., 2009; Shepherd 2009; Drewnowski 2009; Fiqueredo 2009). Researchers and scholars urge key actors to formulate new strategies, in order to face the growing challenges posed by ageing populations and changing disease patterns. The general belief is that the issue of transformation of the Health Sector is not in the hands of the medical community but political decisions are needed to address the socio-economic, environmental and other determinants of health. The need to move away from generalised, one-size-fits-all, programmes towards more patient-centred policies and put emphasis on the quality rather than the length of life of citizens is stressed. (*Davis & Wagner 1999; Zimmet 2000; Weisburger 2000; Bodane & Brownson 2002; Yarnall et al., 2003; Yach et al., 2004; WHO [2002ii; 2004i; 2004ii; 2005;2005i; 2008; 2008i]; Mathers & Loncar 2006; EU 2007i; Percy-Smith 2007; Solomons 2009; Stange 2009*).

Critiques also target, the overdependence of modern systems of healthcare on drug and surgery approaches, largely underplaying the -demonstrated by a volume of evidence- therapeutic role of diet and lifestyle, particularly in the area of chronic disease prevention and treatment, (*WHO [2002; 2002iii]; Vogel et al., 2005; Shai et al., 2001; Calman 1994; Nahleh & Tabbara 2003; Fallat et al., 2007; Casileth & Deng 2004; Chang et al., 2007; Vickers & Zollman 1999; Fairfield & Fletcher 2002; Bodane & Brownson 2002; Shepherd 2009; Zachariadou et al., 2008*). According to researchers twenty thousand tonnes of aspirin are consumed per year in the States, accounting for almost two hundred and twenty five tablets per person, whereas in England every tenth night of sleep is induced by a hypnotic drug and nineteen percent of women and nine percent of men take a prescribed tranquillizer during any one year, (*Illich 1995, pp. 72-73*). Other studies demonstrate that prescribed drugs are the cause of approximately 130,000 deaths annually in America, equating to 365 people daily, (*Bodane & Brownson 2002)*

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Critiques claim that the approaches used within the current settings in the provision of healthcare, are not adequate enough to deal with the complexity of human beings, (*Capra 1996; Engel 1977; Cushman & Hoffman 2004; Plaskett 2004[i-xv]; Hammer & Jonas 2004; Gremy 1984; Percy-Smith 2007; Fallat et al., 2007; Harris 2009*), particularly those with multiple chronic health problems, which appear by evidence to be the rule

rather than the exception in the modern time, *(Dunbar et al., 2008; Stange 2009; Yach et al., 2004; Grone & Carcia-Barbero 2001*). According to World Health Organisation research, as many as 25% of 65-69 year olds and 50% of 80-84 year olds are affected by two or more chronic health conditions simultaneously (*WHO 2008ii*). The possibility that different patients presenting the same symptoms, may need different approaches to treatment on the basis of their specific circumstances and biochemical individuality is not adequately examined, (*Carlson 1979; Yach et al 2004; WHO [2003i; 2005i]; Weisburger 2000; Plaskettt 2004; EU 2005; Percy-Smith 2007; Schenk et al 2008; Reitman and Schadt 2007; Solomons 2009; Harris 2009; Engel 1977; Bottles 2001; Liska et al., 2004; Hyman et al., 2005)*

The need for more patient- rather than disease-centred approaches, is supported by a volume of research which demonstrates the existence of common underlying causal factors of seemingly unrelated chronic health problems, substantiating the case for intracellular functional disorders underlying superficial symptoms. A few characteristic examples include; rheumatoid arthritis and cardiovascular disease emerge from deeper common causes, such as tissue inflammation and small HDL (High Density Lipoprotein) particles, (*Chung et al., 2010; Solomon et al., 2010*) and Metabolic Syndrome was found to be highly prevalent among individuals with psoriasis, (*Love et al., 2010*). Psoriasis was also shown to be an independent risk factor: for cardiovascular disease, (*Gelfand et al., 2006; Malebra et al., 2007; Besgen et al., 2010; Tobin et al., 2010 Mehta et al., 2010 Chen et al., 2008*) -through oxidative stress, endothelial dysfunction, hyperchomosysteinemia, and platelet adhesion, (*Malebra et al., 2007*); for diabetes mellitus, (*Solomon et al., 2010*); and for psychological morbidity, particularly depression, anxiety and suicidality, (*Alevizos et al., 2007; Kurd et al 2010*). Researchers claim that the common pathogenesis is located in gene interaction with environmental factors, (*Besgen et al., 2010; Tobin et al., 2010*

The scientific justification of the role of diet and lifestyle as major determinants in the prevention and treatment of chronic disease, by a volume of research (*as demonstrated above*), provides grounds for concerns on the extent to which

evidence-based therapeutic nutritional interventions are applied within the current setting in the provision of healthcare. Studies demonstrate that in spite of the fact that physicians seem to agree that dietary treatment is important, and most of them believe that providing nutrition counselling is within their scope of practice, most of them do not use nutritional approaches due to lack of time and awareness of available options, (*Kolasa & Rickett 2010; Shai et al., 2001*). Taren et al., (2001), drawing from a volume of research claim that physicians offer less than five minutes nutrition counselling to their patients, (*Taren et al., 2001*). Other researchers demonstrate that family physicians lack confidence in their skills in nutrition counselling. There seems to be a gap between nutrition education and practical application and a two hour nutrition workshop every seven years, as part of a continuing education programme, does not build adequate confidence for nutritional advice, (*Kolasa 2001; Krebs & Primak 2006*). This lack of nutritional counselling competency by most modern doctors is also stressed in a series of reports published by the World Health Organisation, (*WHO [2002; 2002iii; 2004i; 2004ii; 2008]*).

The problem appears to be located in the medical school curricula which are being recently challenged by a number of researchers and scholars for the quantity and quality of nutritional education hours offered. Studies reveal that while ninety-eight percent of medical schools present Nutrition as a component of medical education, most of them do not have an identifiable nutrition curriculum and many schools do not even provide the recommended minimum of twenty five hours of nutrition education, (*Clifford 2000; Hark & Morrison 2000; Jeor et al., 2006; Kolasa 2001; Kolasa & Rickett 2010; Krebs & Primak 2006; Taren et al., 2001; Vickers & Zollman 1999; Shai et al., 2001; WHO [2002; 2002iii; 2004i; 2004ii; 2008]*). Some researchers claim that more than three thirds of medical schools in the United States do not have a specific nutrition course in their curriculum and, even those that have, do not deliver the information in a form that can be practically applied, (*Clifford 2000; Jeor et al., 2006*). A survey carried out in 2004 by Adams et al., (2006) in all 126 US medical schools accredited at that time, aiming to examine the nutrition knowledge and skills of medical students and physicians, showed that the

amount of nutrition education in medical schools remains inadequate, (*Adams et al., 2006*).

This situation is reported as an international issue and similar concerns about the inadequacy of medical-nutrition education have been raised by European educators. Contrary to past prevailing praxis, focused on addressing nutritional deficiencies, new areas of nutrition, including prevention and treatment of chronic diseases, as well as nutrition during pregnancy and lactation, now demand special attention, (*Taren et al., 2001*). Both the World Health Organisation and the European Commission in its 2005 Green Paper, stress the need for health professionals to include routine practical nutritional advice to patients and families during their consultations and to acquire more training in healthy diets, either within existing programmes or in special workshops, 'as an essential part of their curricula' (*WHO 2004i; EU 2005*). Nutrition training in medical schools has been recently identified as an essential component of medical education by a number of organizations in the US, including the American Society for Clinical Nutrition, the American Medical Student Association, the National Academy of Sciences, the American Academy of Family Physicians, the Society for Teachers of Family Medicine, and the US Congress, which passed the National Nutritional Monitoring and Related Research Act of 1990, mandating nutrition as a part of the medical school curriculum, (*Krebs & Primak 2006*).

Abovementioned appear to be valid for Cypriot doctors as well, since the vast majority of them study medicine in Europe and the United States. As regards the provision of healthcare in Cyprus it is criticised for 'inefficiency' and 'ineffectiveness', for 'outdated organization and management', for 'badly-managed hospitals', 'poor-quality clinical services', 'no-patient-friendly attitudes', and for a 'lack of coordination between the public and private sectors', (*Antoniadou 2005; Golna et al., 2004*). Private spending in health in Cyprus is disproportionately high compared to the other European countries, due to the absence of an efficient healthcare system that covers the entire population,

(*Golna et al., 2004, [fig.12+13, p.39-40]; Antoniadou 2005*). ., Furthermore, two studies carried out within the Cypriot health sector by Charalambous et al., [2000, 2002]), demonstrate a statistically significant dissatisfaction by doctors with the pre-registration programme provided by the Ministry of Health. The researchers refer to a number of studies, (*Cohen 1998; Williams et al., 2001*)[1], that emphasise the importance of this programme which should ideally 'serve to establish common core standards and to address issues in disparity in skills, knowledge and attitudes of the trainees who come from varied training backgrounds', (*Charalambous et al., [2000, 2002]*). Apparently, in the case of Cypriot doctors, these aims are not met, undermining their competencies for efficient and effective practice.

For a more expanded account of the review of literature please refer to:

THE EVIDENCE OF ACHIEVEMENT

Part III: CONTEMPORARY HEALTHCARE: A CRITIQUE

2.5. HEALTHCARE IN THE 21ST CENTURY

All above have prompted political actors, academics and scholars from different backgrounds, including the medical community, to reconsider the provision of healthcare and to examine the possibility of new more functional and biopsychosocial models which; will focus of the patient rather than the disease; will emphasise prevention rather than treatment; and will look beyond the narrow barriers of the traditional health sector to address the actual determinants of disease, (*Cooper et al., 1998; Vickers & Zollman 1999; Mahady 2001; Bodane & Brownson 2002; WHO [2003ii, 2004ii]; Sampson et al., 2003; Nahleh & Tabbara 2003; Mann et al., 2004; Cushman & Hoffmann 2004; Barrett et al., 2004; Vogel et al., 2005; Kaboru et al., 2006; Di Sarsina 2007; Savva et al., 2007; Baer 2007;Chang et al., 2007; Patterson et al., 2008; DeSylvia et al., 2008; Tang et al., 2008; Chen 2008; Joos et al., 2009; Theodosopoulou 2010*). The new models of healthcare proposed, provide for practitioners from multidisciplinary backgrounds to coexist and work as teams,

[1] Quoted in Charalambous et al., (2000 and 2001)

placing the benefit of the patient at the heart of all actions. They all have Biomedicine as their basic component and they are presented as more capable of coping with the complexity of human beings and with the challenges posed by the rising number of ageing patients with multiple chronic conditions, (*Mann et al., 2004; Di Sarsina 2007; Ben-Arye 2010; Grone & Carcia-Barbero 2001; Snyderman & Williams 2003; Ginsburg & Willard 2009; Cushman & Hoffmann 2004; Ernst et al., 2004; Stange 2009i Engel [1977;1980]; Guzman et al., 2002; Jones et al., 2002; Borrell-Carrio et al., 2004; Lane et al., 2005; Aujoulat et al., 2007; Quirke & Quadilliere 2008; Weiner 2008; Travakoli 2009; Harding et al., 2010; Van Weel & Rosser 2010; Jones et al., 2005; Bland et al., 2005; IMF 2008; Liska 2005; Levin et al.,2006*).

There is no doubt that the first decade of the twentieth century represents a critical moment in the history of health systems, a turning point at which important decisions are ready to be taken at all levels –political, social and medical. At present, adequate evidence exists to demonstrate that a new philosophy in the provision of healthcare is already widely discussed within academic and medical forums and it appears in increasing frequency as an item in the agenda of national and international conventions, (*Carlson 1979; Cooper et al 1998; Mahady 2001; Bodane & Brownson 2002; Nahleh & Tabbara 2003; Sampson et al.2003; WHO 2003ii; Barrett et al 2004; Cushman & Hoffman 2004; Go et al., 2004; Mann et al. 2004; Vogel et al 2005; Hakobyan et al. 2006; Kaboru et al. 2006; Baer 2007; Chang et al. 2007; Di Sarsina 2007; Chen 2008; Patterson et al 2008; Tang et al. 2008; Joos et al. 2009; Stange 2009*). A worth noting finding from the review of literature is that a significant part of the scientific community, including academics and scholars of medical background, appears adequately prepared and ready to accept and promote the principles of the new paradigm in the provision of healthcare, which germinates from the revolutionary developments of the sciences of physics, biology, biochemistry, and genomics, and grows on the acknowledgement of the imperative to address more effectively the problem of the rising number of chronically ill patients with multiple health problems. . Scientific publications present the views of scholars and researchers mostly medical, on how the new model of Healthcare should be. A number of terms appear in literature such as 'Integrated', 'Biopsychosocial', 'Nutrigenomic', 'Functional', and 'Wholistic' , (*Engel [1977; 1980]; Lewontin 2000; Guzman et al., 2002; Bland 2002; Leichsenring 2004; Mann et al., 2004; Bland 2004; Liska et al., 2004; Cushman & Hoffmann 2004; Jones et al., 2005; Jones & Quinn 2005; Liska 2005; Galland 2005; Hyman et al., 2005; Lamb 2005; Sudak 2005; Sult 2005; Levin et*

al., 2006; Di Sarsina 2007; Stange 2009; Maes & Twisk 2010; Harding et al., 2010). A closer look at these models allows no doubt that they all share the same epistemological principles of Healthcare: *Wholism, functionality, and biochemical individuality;* and they are all integrated models, with Biomedicine being their basic component.

An equally significant finding extracted from the review of literature is evidence demonstrating that a paradigm shift in the provision of healthcare is already materialising at different levels, but most importantly amongst the public which, aiming to find solutions to their persisting, often multiple chronic health problems, resort more and more to alternative therapeutic approaches, not rarely in conjunction with their medical treatments, (*Carlson 1979; Eisenberg et al., 1998; Vickers & Zollman 1999; Cooper et al. 1998; Risberg et al. 1999; Mahady 2001; Bodane & Brownson 2002; Nahleh & Tabbara 2003; Casileth & Deng 2004; Mann et al. 2004; Barret et al. 2004; Hakobyan et al. 2006; Kaboru et al. 2006; Chang et al. 2007; Di Sarsina 2007;Kennedy et al., 2007; Baer 2007; Avogo et al. 2008; Patterson et al. 2008; Joos et al. 2009*). The new philosophy in healthcare is also evident in a number policies, occurring at the political level: Joint Programming Initiatives, Health Strategies, and other forms of action are already being implemented, and others still planned, both at International and European Union, as well as at governmental level, in an effort to address the 'grand challenges' in health of the twenty first century. Policies aim at: promoting more patient-centred, personalised models of healthcare, in an acknowledgment of the patient's biochemical individuality and unique genomic profile; supporting citizens' right to decision-making and health literacy; addressing the multitude of socioeconomic and environmental determinants of health; opening the boundaries of healthcare to include Non-Conventional Medicines (NCMs) and registering NCM practitioners; encouraging cooperation between Biomedicine and NCMs; and using innovative technologies in genomics, biotechnology and nanotechnology; (*WHO 2002iii; Di Sarsina 2007; EU 2007i; OECD 2010 EU 2010 [i; ii; iii]; CNHC 2011; CNHC 2011i).* Developments are also evident within the educational domain, where a shift of focus of medical education towards more integrative, biopsychosocial, and functional approaches to healthcare appears to occur. Several medical schools in the United States and Europe offer now courses on

NCMs and many hospitals educate doctors in NCMs, (*Eisenberg et al., 1998; Di Sarsina 2007; Cushman & Hoffman 2004; Theodosopoulou 2010; TVU 2011;* NCA *2011; CNELM, 2011; Ben-Arye 2010*). An important finding is the role of socioeconomic status as a major determinant of NCMs use. Research demonstrates a higher prevalence of NCMs use, often in combination with their medical treatments, among college and university graduates, as well as among people with higher incomes, (*Chang et al., 2007; Kennedy et al., 2007; Lee et al., 2002; Eisenberg et al., 1998; Avogo et al., 2008*).

As an example of the new philosophy in healthcare, the modernisation of the health sector of the United Kingdom in the area of Nutritional Therapy, has been examined and presented in this report, (*Chapter 5.4.1 Finding Seven. An example from Europe*). According to Fahy et al., (2011) one of the main arguments used to justify the reforms of the United Kingdom's National Health System are the potential costs of an ageing population. The researchers indentify this problem as a general problem in the European Union where the number of people aged over 65 will almost double over the next 50 years, with only two people of 'working age' for each over-65-old, compared with four today. It is estimated that expenditures on health in the EU countries will increase by 15-40%. A proposal for a 'pilot partnership on active and healthy ageing' is already put on the table by the European Commission (*Fahy et al., 2011*)

Details of the United Kingdom reforms in the area of Nutritional Medicine (or as otherwise termed Nutritional Therapy) are provided in the Chapter 5.4.1: Finding Seven

For a more expanded account of the review of literature please refer to:
THE EVIDENCE OF ACHIEVEMENT

PART V: PUSHING FORWARD THE BOUNDARIES OF HEALTHCARE
Chapter I: *A NEW PHILOSOPHY IN THE PROVISION OF HEALTHCARE*
Chapter II: *NEW MODELS OF HEALTHCARE PROPOSED*

3. METHODOLOGY

This action research was carried out within the wider area related to the provision of healthcare in Cyprus but with reference to the worldwide scope of medical activity, including research, practice, and literature. Several factors were considered before decisions were taken for the most appropriate data collection methods including: the context and conditions in which the project was carried out; my role as an insider researcher within an area of antithesis and controversy; issues of validity and reliability of the results; availability of resources; ethical, legal and confidentiality issues emerging from the use of patients' personal information; available sources of primary and secondary data in view of the peculiarity of the subject under investigation in Cyprus; and time constraints. All preliminary considerations, emerging from reflection and critical evaluation, are discussed below.

3.1. A CRITICAL APPRAISAL OF MEDICAL RESEARCH

A first step, before selecting the research techniques, was to critically appraise current practices in medical research worldwide. This action aimed to identify the strengths and weaknesses of different methodologies, which are currently used to support the methods and means used within Contemporary Healthcare in the prevention and treatment of chronic disease Several areas were investigated including: the epistemological basis of medical research and its critiques; the most frequently used approaches for validation of the methods and means used by contemporary medicine during the last three centuries; literature on action research and its techniques; and new methodologies that have developed under the force of criticisms of established approaches.

3.1.1. The epistemological basis of medical research

Undoubtedly there is no truism in what constitutes a 'right' approach to a specific area of research. An 'appropriate' approach would be the one that will help us find answers to our research questions. All research is based on assumptions about how the world is perceived. According to Trochim (2006),

philosophers have been arguing for about two millennia on how to find answers to the question 'how we can best understand the world' (*Trochim 2006*). Apparently, in our everyday life, we seek to solve problems and expand our knowledge by inquiry or study; however, research is a systematic method of inquiry, a pre-organised way of asking questions, guided by a methodology, which is underpinned by specific philosophical values summed up into the word *epistemology*. Scientific' approaches may alternate with 'non-scientific' ones and quantitative data may be used at some point to support and add depth and validity to information gained from qualitative approaches. Quantitative and qualitative approaches represent the two major families of research. Quantitative research has its roots in the nineteenth century positivist framework of the French philosopher Auguste Comte. It is used in both the natural and social sciences and uses scientific methods to generate models, theories and hypotheses. It uses experimental control and manipulation of variables and seeks to find 'what' 'where' and 'when'. Oppositely, qualitative research, which began to gain recognition in the 1970s, attempts to understand the reasons that govern human behaviour and seeks to find the 'why' and 'how' of decision making. Maxwell (2004), in his article: *Reemergent scientism, postmodernism, and dialogue across differences*, stressing the impossibility of qualitative research to be assimilated to a 'neopositivist paradigm', or to be subordinated to quantitative or experimental research, calls for a 'dialogue across differences' between researchers working in different paradigms and respect to the 'otherness'. He characteristically emphasises the potential of qualitative research in addressing some of the limitations of quantitative and experimental research (*Maxwell 2004*)

3.1.2. Approaches to medical research

The Health Sector of Cyprus, within which this research was carried out, belongs to a wider medical context where scientific quantitative approaches, have been extensively used in support of the methods and means used by

modern medicine. The most important are *experiments* and *clinical trials*. Other methods frequently used are *epidemiological studies, systematic reviews* and *meta-analyses*. A brief account of each of the most popular methods is given below

Experiments

Laboratory experiments represent a major section of medical research, where studies are carried out under strict laboratory conditions (closed systems) with rigorous control of all variables and deduction of theories. According to the positivistic theory of causation, if you can relate an event, observation or other phenomenon to a general law then you can explain it, (*Robson 2000*). However, an increasingly accumulating body of evidence questions the universality of their laws. Seale et al., (2007) cites a number of examples of how famous theorists of the past, such as Galileo, Newton, Einstein and Bohr have constructed 'hard' scientific laws by manipulating their data to prove their theories, (*Seale et al., 2007, p.8*). In the case of *experimental research*, in which humans are involved, inference from a single experimental report proves to be very unreliable and generally unacceptable as scientific evidence, as biological organisms are complex and do not react to the same stimulus in the same way, (*Doyle 2004*). A number of researchers demonstrate the weaknesses of *experiments* in controlling all variables, (*Scahill et al., 2001; Doyle 2004*), leading to discrepancies between studies on the same issue,(*Job et al., 2002; Shen et al., 2007; Yearman et al., 2004*) and to *experimenter effect* biases,(*Caroll 2007*).

Clinical Trials

An equally significant part of medical research is conducted through *clinical trials* more commonly known as *Randomised Controlled Trials* (RCTs). RCTs are considered the most reliable forms of scientific research in the health sector, (*Doyle 2004*). They are the most frequently used approaches in establishing the efficacy of medicines or medical procedures/treatments. RCTs were introduced in the 1950s and were assigned a role as a 'gold standard' for medical research, (*Boccia et al., 2007*). These experimental

methodologies can be *open,* (both researcher and patient know all details of the treatment), *single-blind* (only the researcher knows the details), or *double-blind* (the patient does not know the details and more than one researchers are used, each given only part of the information). Subjects are allocated treatments and/or medicines at random. *Control groups*, who either do not receive the treatment/drug under study or receive a *placebo,* are used for comparison. Peer and government reviews are undertaken when the drug manufacturer applies for a licence of a drug, or when the results of a treatment are presented for publication.

A critical evaluation of relevant literature reveals weaknesses in the conduct of these trials, which undermine the validity and reliability of their results. These include different biases, described as *systematic errors*, (*Sackett 1979; Rothman 2002*), including *selection biases, comparison biases,* and *information biases*, which may be related to experimenter's, sponsor's, and/or community's expectations, (*Boccia 2007; Prescott et al., 2007; Warshafsky et al., 1993*). Errors in design, statistical analysis, reporting and interpretation, are also noted, (*Garcia-Berthou & Alcaraz 2004; Jeng 2006*). A number of reports refer to *cognitive biases*, which consist of a long list of different ways the results of a trial can be altered, including *observer* and *subject expectancy effects*, or the *placebo effect*, (*Tversky & Kahneman 1974, Heller et al., 1998; Mogg et al., 1998*). Financial, commercial, political and academic pressures are also reported by critics, (*Sivaramakrishnan 2006*).

Epidemiological research

Epidemiological research, conducted through *surveys,* is also a significant part of systematic inquiry on health matters and can produce both quantitative and qualitative results. Major research techniques used are the *questionnaires* and the *interviews*. Surveys investigate *cause-effect relationships* in public life and it is a relatively cheap and quick way of obtaining information. However, biases are common in this type of research as well, usually in the representativeness of the selected sample for study

and in the question wording. Warnecke et al., (1997), in their epidemiological study, provide evidence of several ways in which the validity of the results of a survey can be threatened by biases. Gender and race/ethnicity appear to influence interpretation of questions, in the absence of specific cues in the question format on how to respond. An important finding was the unwillingness of respondents to disclose socially undesirable behaviour to interviewers from different racial or ethnic groups, (*Warnecke et al., 1997*). Other researchers discuss the value of *cognitive theory* to understand how respondents perceive and interpret questions; using cognitive interviewing to test questions that are complex, sensitive or intrusive prior to distribution to the sample, proves to be a useful practice, (*Drennan 2003; Mogg et al., 1998*).

Literature reviews, Systematic reviews and Meta-analyses

Meta-analysis is the procedure of combining information from several studies aiming to provide stronger evidence for a specific hypothesis. Very often this method is required by regulatory bodies for the approval of specific drugs submitted by pharmaceutical companies. Researchers claim that systematic reviews on the efficacy, effectiveness and benefits of medical interventions have increased dramatically during the last four decades; however the same does not apply for their harmful effects which seem to be underreported, (*MacIntosh et al., 2004*). Criticisms appear in literature for different errors and biases, including lack and imprecision of sensitivity analyses, sample representativeness, (*Egger & Smith 1995; Greenhalgh 1997; Linde & Willich 2003; Bachmann et al., 2006*), differences in the inclusion criteria during the sampling process and discrepancies traceable to the multiple decisions taken during planning, performance, and interpretation, (*Linde & Willich 2003*). Greenhalgh (1997) in her critical evaluation of systematic reviews, demonstrates several examples on biases and errors from systematic reviews, and stresses the need to 'work through the "what ifs", considering several issues such as: exclusion/inclusion of unpublished studies and trials of lower methodological quality; different quality weightings; relevance of trials included; precision of research questions; adequacy of databases explored; potentially important

data sources through 'referencing of the references'; methodological quality; and external validity. An important point mentioned in her article is the need for the evaluator to realise the difference between *statistical heterogeneity* and *clinical heterogeneity*, the former being a mathematical exercise and the job of the statistician, whereas the latter is an interpretative exercise and requires imagination, common sense, and hands-on clinical or research experience. Reference is made to Professor Hans Eysenck and his critique on the science of meta-analysis on the basis of which, misleading conclusions emerging from the combination of the results of studies 'done on different populations, in different places, at different times and for different reasons' are explained in terms of 'publication biases, methodological weaknesses in the smaller trials and clinical heterogeneity', (*Greenhalgh 1997*).

3.1.3. Action research

Action Research has been extensively used for the promotion of change and transformation in problematic areas at different levels of the healthcare sector. The term, first coined by Professor Kurt Lewin during the forties, (*Robson 2002*) represents a qualitative approach of inquiry that leads to social change, through the creation of reflective knowledge and action based on that knowledge. *Action research* challenges, questions, and critically reflects on current practices, and seeks to promote transformations that are evidently to the benefit of the participants in an organisation. A plethora of this type of research has been carried out using methodologies that are best suited to specific problems and organisations. For example, Troskie (1997) used *action research* to determine the possibility of collaboration between traditional healers with primary health care services in South Africa. Findings included the reasons for collaboration, training of traditional healers, their role in the community, the treatments they provided and recommendations for change towards better collaboration (*Troskie 1997*). Cutts et al., (1993), discuss the importance of surveillance as a basis for public health programs. In their review, they refer to the WHO Expanded Programme on Immunisation (EPI) which has designed and used different surveillance

methods to improve disease control. Data collected from surveillance are used to determine public health priorities, decide on appropriate immunization programs, target populations at high risk, implement immunisation programs, and evaluate program effectiveness, (*Cutts et al., 1993*).

Critics discuss the role of *action research* in relation to the investigation and practical implementation of innovations in the Health Sector. Analysing the strengths and limitations of action research as a 'whole systems approach', they note the paradox of the fact that 'although action research has much to offer, it has only a limited impact in the innovation field', (*Waterman et al., 2007*).. Ross et al., (2005), claim that 'the relationship between the worlds of research and healthcare is uneasy and contested and, as such, is a breeding ground for challenging questions about how evidence can be used to foment change in clinical practice'. They characteristically argue that 'using research to change practice needs clinical leaders who are supported by the organisation and have the skills to implement research evidence, manage uncertainty and built trust with a range of other professionals', (*Ross et al., 2005*).

A paradigm shift in action research

Under the force of criticism of the ability of current approaches to action research to promote change and transformation in social areas of high complexity, the last decade has seen the burgeoning of a number of new, methodologies, which claim to enhance the validity and reliability of action research. The majority of these methods -such as, *Evaluative Inquiry*, *Appreciative Inquiry*, and *Soft Systems Methodology*- use tools that are interactive, collaborative, and constructive and claim to simplify the complexity of social systems, (*D'Arms 1998; Owen 2007; Bushe & Kassam 2005; Cooperrider and Whitney 2001*). Among these, *Soft Systems Methodology* (*SSM*), defined by its inventor Peter Checkland as 'systems thinking about the real world', has been widely discussed and contested by researchers and scholars for its much claimed ability to handle extremely complex 'problem situations' in which there is a high social, political and human activity component, (*Gharajedaghi 2004;*

Smyth et al., 1976; Dick & Swepson 1994; Couprie et al., 2006; Kenny & Gardner 1988; Jarvis 2007). Critics – including its inventor Peter Checkland, (*Bergvall-Kareborn 2001 & 2004*)- point out to different weaknesses in the SSM techniques that undermine the validity and reliability of its results. These include: 'its tendency to result in regulatory, rather than radical, agendas for change', (*Bergvall-Kareborn 2001*); a number of contradictions in the CATWOE[1] concepts, (*Bergvall-Kareborn et al., 2005*); a false dualism evident in the division between the 'real world' and the 'systems thinking world', (*Checkland & Tsouvalis 1996*); the problematic nature of SSM technique in comparing its conceptual models with the real world, both in theory and practice, (*Houghton & Ledington 2002*); and its interpretative, rather than objectivist, philosophical underpinnings, (*Rose & Haynes 1999*).

3.2. THE RESEARCH APPROACH

Action research was considered as the most suitable approach for this project which aimed to contribute effectively to transformation and change, within the area of the provision of healthcare in Cyprus. Categorizing the different factors to be considered, in terms of their significance for the aims of this project, extra weight was attributed to issues of validity and reliability of findings, in connection with my role as an insider researcher within a professional area characterised by antagonism and, not infrequently, hostility between so-called 'Conventionals' and 'Alternatives'. The need to produce evidence-based results, which could be effectively promoted as a persuasive tool towards change in current mentalities on a number of critical health issues, was of utmost importance. Taking seriously into consideration the extreme complexity of this area, in which a multitude of intricately interdependent variables critically interact and intermingle with social, political, and human elements, this endeavour could be, undoubtedly, considered a daunting challenge. Couprie et al., (2006) emphasise how easy is to implement structural and procedural changes, as compared to the great difficulty to change attitudes

[1] CATWOE: the Soft System Methodology's mnemonic for the words: Clients-Actors-Transformations-Weltanschauung)Worldview)-Owners-Environment. CATWOE analysis helps in working out a 'root definition' and expressing the domain of the problem,)Jarvis 2007)

(*Couprie et al., 2006*). There is no doubt that different actors in the Health Sector may have different perceptions of the situation as problematic and different views of how improvement might be realised. The possibility of some actors believing that there is no problem of the situation as it is, was not underestimated.

Nevertheless, a number of preliminary meetings, which I had with key actors, provided me with adequate confidence and encouraged me to proceed with this action research –without of course completely ignoring the possibility of achieving only a modest change. The key actors met included the then-Cypriot European Commissioner for Health, the then-Permanent Secretary of the Ministry of Health of Cyprus, and a Cypriot Member of the European Parliament. They all welcomed my choice of this project and expressed their wish to receive and use my findings, within the context of their interest to explore further the possibility of synergies between conventional and complementary medicines. (*Appendices: 5, 6, 7*). In addition, they expressed their willingness to provide help in the form of data and other information I might need.

3.3. DATA COLLECTION TECHNIQUES

In an attempt to minimise, to the extent possible, potential threads to validity and reliability of findings, more than one methodologies where chosen for the collection of data. On the basis of a triangulation logic, examination of existing knowledge obtained from a volume of **literature** was contrasted, compared, and updated with new knowledge created from: a number of **interviews** with key actors of the health sector; a **survey** with a nationally stratified sample; and analysis of existing patients' **case studies**; Hence, each objective of the research was achieved through a combination of the following methodologies:

1. **Literature review**
2. **A nationally stratified survey**
3. **Interviews with key actors and decision makers of the health sector of Cyprus**

4. **A number of case studies from my clinical practice in Nutritional Medicine**

The rationale behind the choice of the specific methodologies is discussed below:

3.3.1. Literature review

Literature review represented an analytical approach into existing evidence on the context and conditions that govern the provision of healthcare. This method of inquiry was chosen as the most appropriate to explore and evaluate the academic perspective on the strengths and weaknesses in this area, particularly in the prevention and treatment of chronic disease, as well as the influences –philosophical, economic and, not infrequently, political- that formed medical thought and practice throughout the ages. Within the context of a qualitative approach to research, literature review attempted to find answers to 'why' and 'how'-as viewed by different scholars and researchers- on a number of critical health issues related to the ultimate aims of this project, such as:

- The evolution of scientific medicine as a dominant system in the West and its epistemological roots
- The devolution of Nutritional medicine throughout the ages and its revival during the last decades
- The reasons of the rising incidence of chronic disease in the western world and the role of contemporary health systems in this
- Resort to alternative and/or traditional therapeutic modalities in the western world
- The extent to which evidence-based nutritional interventions are effectively applied within the current setting of the provision of healthcare

- Pluralism and Integrative trends in contemporary healthcare

3.3.2. Survey

The survey was designed as an attempt to generate, both quantitative and qualitative, public opinion data on a number of critical issues related to the provision of healthcare in Cyprus. This activity was seen as a means to access people's deeper health perceptions, beliefs, desires, and prejudices on several issues regarding their health, diet and lifestyle habits including: incidence of chronic disease in Cyprus; health orientations of Cypriots; conventional and alternative therapies; who and why resort to alternative therapies; opinions on the degree of success of medical treatments of chronic diseases; doctor/patient relationships; availability and use of nutritional means; and perceived problematic areas in the provision of healthcare in Cyprus. Preparation for the survey included review of relevant literature on several issues related to this activity, such as: how to construct and administer questionnaires and how to minimise the threads to validity and reliability of results, (*McNiff et al., 2003; Cohen et al., 2000; Bell 2005; Robson 2002; Seale et al., 2007; Warnecke et al., 1997; Drennan 2003; Papanastasiou & Papanastasiou 2005; Salant & Dillman 1994*). Support for the administering of the questionnaire was provided by the University of Nicosia.

3.3.3. Interviews

Interviews represented a phenomenological approach into the political perspective on different issues arising from the literature review and the objectives of the research. The aim was to explore opinions, viewpoints and beliefs of a number of key actors, who were selected on the basis of their authority and power to contribute effectively to a change in the politics and culture of the health sector of Cyprus. Relevant literature was reviewed looking for guidelines on how to perform this part of the research in the best possible way and how to produce results of the highest possible validity and reliability, (*Cohen et al., 2000; Robson, 2002; Bell, 2005; Couprie et al., 2006; van Dijk 1993; Janks 1997; Fairclough [1992; 2000; 2005; 2005i]; Widdowson 1995; van Dijk [1993; 1998]; Janks 1997; Alvesson & Karreman 2000*). Interviews were subjected to discourse analysis in an attempt to obtain

more insights on themes of which, even the interviewees they might not have been aware.

Conduct, transcription and analysis of interviews are issues much debated in literature. The ways, by which information obtained from discourse can be used to generate knowledge, is extensively discussed by several scholars and researchers,(*Cohen et al., 2000; Robson, 2002; Bell, 2005; Couprie et al., 2006; van Dijk 1993; Janks 1997; Fairclough [1992; 2000; 2005; 2005i]; Widdowson 1995; van Dijk 1993 & 1998; Janks 1997; Alvesson & Karreman 2000*). Cohen et al., (*2000, pp57 and 267*), drawing from Laing's (1967:53)[1] cautionary view of data as *capta* - denoting that they are 'not so much given as taken'-, claim that 'the interview is not exclusively either subjective or objective, it is intersubjective'. Referring to the analysis of data, they emphasise the great tension between maintaining a sense of wholism of the interview and the tendency for analysis to atomize and fragment the data, 'thereby losing the synergy of the whole', (*Cohen et al., 2000, p282*). Couprie et al., (2006), suggest that interviews with key actors should be highly unstructured, at least at the beginning, to allow people to freely express themselves, without directing them in any way (*Couprie et al., 2006*). However, Robson (2002), warns that highly unstructured interviews are not an easy option and, quoting Lofland et al., (1995)[2], emphasises the importance of an *interview guide.* In addition, he argues that 'time planning and time budgeting is a crucial skill of successful enquiry in the real world' and reminds that one hour taped interview takes ten hours to transcribe, -on the same issue Bell (2005), estimates at least four hours, (*Robson 2002; Bell 2005*). Robson characteristically states that 'it is too late to start thinking about analysis after the interviewing is done'. Bell, along the same lines, draws the attention of the researcher to the need of a 'great deal of expertise to control and a great deal of time to analyse' the volume of data produced from highly unstructured interviews. As an alternative, she suggests the *guided* or *focussed interview,* in which a framework is prepared beforehand to guide the interview, (*Bell 2005 pp157-172*).

[1] Quoted in Cohen et al., (2000)
[2] Quoted in Robson (2002)

3.3.4. Analysis of case studies from my clinical practice

Qualitative, and where possible quantitative, analysis of a number of already existing case studies from my clinical practice as a Nutritional Medicine Practitioner, was a method chosen to compare, contrast, and in many ways enhance, the findings from the literature review and the survey on a number of issues such as: who and why resort to alternative therapies; opinions on the degree of success of medical treatments of specific chronic health problems; health orientations of Cypriots.

A review of relevant literature proved very informative on the importance of clinical practice as a source of valuable knowledge and on the most appropriate methods to derive this knowledge. David Armstrong (1977), in his article 'Clinical Sense and Clinical Practice', claims that an important for several centuries source of medical knowledge, that of clinical practice, was downgraded during the twentieth century by the advent of the 'more scientific methods'. He asserts that, although the advent of the controlled clinical trial in the interwar years upset the balance between science and clinical experience as forms of medical knowledge, most recent trends suggest a return to the importance of clinical experience both as a s*cience* and an *art.* Clinical practice, in Armstrong's words, 'is the most difficult of all scientific methods- a method that cannot be taught in a short time like the experimental method, but is given to those who for years have toiled in the routine of medical practice', (*Armstrong 1997*).

As regards the analysis, Yin (2003), provides valuable insights on methods of analysis of multiple case studies, within a theoretical framework of analytic generalisation. Yin draws attention to the fact that case studies should not be considered as methods to reach statistical generalisations. Case studies can answer 'how' and 'why' questions, similarly to experiments but without the requirement of control of variables. The misconception to be avoided is that the results of a case study cannot, and should not, be generalised to other studies but to a theory, through a replication logic, as is the case of

experiments. The sampling logic, used in surveys should be avoided. Yin stresses the importance of a number of prerequisites for reliable and valid results from case studies including: the expertise of the investigator and the high demands of this type of research on his/her intellect, ego and emotions; a protocol for the investigation; a case study database; and maintenance of a chain of evidence. Provided these requirements are met the Yin proceeds to suggest a number of analytic strategies and techniques, such as pattern matching, explanation building, time-series analysis, logic models and cross-case synthesis. The attention of the investigator is drawn to the challenge he/she has to face on how to develop strong, plausible, and fair arguments that are supported by the data. (*Yin, 2003*)

3.4. ETHICAL AND WORKER RESEARCHER CONSIDERATIONS

The conduct of this research on the basis of the highest possible ethical and professional standards was the focus of critical examination. A review of relevant literature provided important insights to a multitude of ethical and social issues related to research, (*Cohen et al., 2000; Beattie 2007; Fisk 2007; Tomamichel et al., 1995; Daugherty 1999*). Apparently, **ethical and insider researcher considerations** are an important chapter in all research but most importantly in the medical sector. Cavan, (1977:810)[1], defines ethics as 'a matter of principled sensitivity to the rights of others' and a limit to our pursuit of truth. According to Weijer et al., (1997), medical research involving human subjects should be guided by three principles: **respect for persons** (obtaining *informed consent*); **beneficence** (favourable balance between benefits and harms of participation); and **justice** (not exploiting vulnerable people and not excluding those who may benefit from participation without good cause), (*Weijer et al., 1997*). The essentiality of *informed consent,* 'arises from the subject's right to freedom and self-determination', (*Cohen et al., 2000 p51*), and it is defined as, 'the procedure in which individuals choose whether to participate in an investigation after being informed of facts that would be likely to influence their decisions', (*Diener & Grandall*

[1] Quoted in Cohen et al., 2000 p.56

1978[1]). A number of authors point out that the *written informed consent* procedure ensures both the researcher's and the participants' rights, (*Bell 2005, p45*), and 'reduces the legal liability of the researcher', (*Bowling, 2002, p157*[2]). On the other hand, Cohen et al., (2000) remind us that not all research 'can cause pain and indignity to the participants' and therefore informed consent may not always be absolutely necessary if the research does not endanger the participants in any way (*Cohen et al., 2000*).

In view of above, and following an informative meeting with a member of the Board of the Cyprus Committee of Bioethics –who expressed his view that my research does not entail risks for the participants but advised me to get their written informed consent- I proceeded accordingly to obtain a written informed consent from all patients, whose data were to be used (anonymously) for the aims of this project (*Appendix 10*). Patients were provided with sufficient explanation on the purpose of this research and adequate time to read the consent form. Additionally, they were offered the opportunity for access to the results of the project, upon request. All measures were taken to avoid any reference that would, in any way, reveal identities and any cases that entailed such a danger were not used. It is worth noting that a preliminary small scale opinion research revealed that the overwhelming majority of my patients, being very happy with the results of their treatments, and hoping that other people might also benefit from this research, expressed their willingness and enthusiasm to participate in this effort.

A second concern was related to the conduct of the interviews and the need to develop the most appropriate techniques, for obtaining access and establishing rapport with my interviewees – all members of the political and medical elite of the country. Reviewing a volume of literature by other researchers and scholars on their thoughts and experiences on *insiderness* in research provided me with valuable insights on the disadvantages but most importantly on the

[1] Quoted in Cohen et al., 2000, p.51
[2] Quoted in Bell 2005, p.45

advantages of being an insider researcher. Harrison (2001) discusses the relationships between the researcher and the researched and the obligations of reciprocity of the researchers, which represents the 'give and take' of social interactions and facilitates access to, and the establishment of rapport with the researched. The researcher claims that 'through judicious use of self-disclosure, interviews can become conversations, and richer data are possible', (*Harrison 2001*). The possibilities of greater understanding of both, others and ourselves, as well as our world, through more intimate relationships with the participants, are stressed, (*Busier et al., 1977, p.165*)[1]. Robert Labaree (2002), based on a critical review of literature and his personal experiences, embarks on a critical discussion on the ethical and methodological dilemmas of being an *insider participant observer.* Providing a very interesting account of *insiderness* from a positive perspective, he claims that *insiderness* privileges the researcher and allows access to information that might not be obtainable by the *outsider.* He identifies four values in *insiderness:* shared experiences; greater access; cultural interpretation; and deeper understanding and clarity of thought, (*Labaree 2000*). DeVault (*1996 p.37*)[2], refers to shared experiences which are viewed as providing 'a privileged means of establishing rapport between the researcher and the informant'. Diane Fraser (1997), in a critical reflection from her action research study in her own school, describes the negative side of *insiderness,* as are the difficulties in trying to present data without making personal interpretations, in exposing routine practice to potentially unfair criticism, and the problem of not portraying data in context. She critically evaluates issues of confidentially and anonymity, of personal accountability and role conflict, as well as 'subjectivist' approaches to evaluation, balanced description, and analysis, (*Fraser 1997*).

There is no doubt that the volume of thoughts and experiences of other researchers reviewed, provided me with valuable insights on how to use my *insiderness* as a catalyst to obtain access and establish rapport with my

[1] Quoted in Harrison et al., (2001)
[2] Quoted in Labaree)2000)

interviewees. Apparently, I needed to focus on the positive aspects of being an insider researcher in order to counteract the negative realities, which made my insider role harder to perform and imposed greater demands on obtaining high validity and reliability of my findings, if my advocacy for integration of medicine could be firmly supported. The adverse factors were, among others: the absence of a professional Nutritional Medicine community in Cyprus; a long lasting antagonism and in many ways hostility between conventional and alternative practitioners; and the strong influence of unions of the Health Sector on the politics and culture of the area of the provision of healthcare. On the positive side I could identify a number of encouraging realities including: my deep knowledge and expertise in the subject of Nutritional Medicine; a respect by several members of the medical community for practising for several years on the basis of high professional and ethical standards; my own respect for other medical practitioners work; and my excellent cooperation and exchange of clients with a some doctors.

An equally important concern, related to the materialisation of my aims, was to find ways for the dissemination of the results of my research. A book, prepared as the Evidence of Achievement of this research, was offered to be published by the University of Nicosia and be included in the bibliography of its new course in Nutrition. This was considered an important method of promulgation of the new knowledge created during the course of this research. In addition, a number of key actors of the health sector expressed their interest to receive the findings of the research, (*Appendices 5,6,7*).. Furthermore a number of publications were planned in scientific journals.

Note: ***Some of the key actors expressed their wish their interviews to be used only for the purposes of the Doctorate Thesis but not to be published in the media. For this reason all results from the transcription and analysis of the interviews were used anonymously in both the PROJECT REPORT and the EVIDENCE OF ACHIEVEMENT. Similarly, in the LETTER TO THE STAKEHOLDERS, provision was made to avoid references to particular names and identities.***

4. PROJECT ACTIVITY

Following critical evaluation of several factors related to the context and conditions in which this action research was planned to be carried out -discussed in detail in chapter three- and aiming to enhance, through a triangulation logic, the validity and reliability of findings, four methodologies were selected for data collection. A volume of existing knowledge, obtained from a critical review of the work and writings of several scholars, researchers, and other academics, during the last two and a half millennia, was contrasted, compared, and updated with fresh knowledge created from the statistical analysis of the results of a survey, the analysis of personal interviews and analysis of a, randomly selected, number of case studies from my clinical practice. The four methodologies are listed below followed by an account of the activity involved in carrying out each one of them.

1. Literature review
2. Interviews
3. Survey
4. Analysis of case studies from clinical practice

4.1. LITERATURE REVIEW

Literature review represented an analytical approach into a volume of publications including: articles, books, treatises journals, clinical studies and experiments, systematic reviews and meta-analyses, official statistics and other documents. The inquiry was profound and pervasive at all levels- national (Cyprus) and international- and extended into both the depth and breadth of time, in search of evidence of the academic perspective on a number of critical issues relevant to the aims and objectives of this project. A considerable part of the review focused on historical retrospection, in an effort to identify the roots and pathway of evolution of Medical Thought and the influence of ideas in the development of its various expressions (Hippocratic, Galenic, Nutritional, Biomedicine, etc),

A volume of the work of several scholars, researchers and commentators was reviewed, beginning around the sixth century B.C., and following the pathway of evolution of Medicine throughout the first Christian and Roman eras, the Dark Ages, the Renaissance, and the Enlightenment, towards the twenty first century, in an effort to identify the landmarks in the history of medicine that contributed to the establishment of the present paradigm of medical thought as the dominant system in the West, (*Abercrombie et al., 1994; Adams 1904; Arieti 2005; Bekyarova et al., 2009; Bennett 2001; Berlivet 2008; Bernstam et al., 2009; Blackburn [1996; 2005]; Bodenreider & Burgun 2008; Bullock et al 1998; Capra 1982; Carr 1920; Carriero et al. 2005; Chow et al 2008; Cordell 1904; Cozzens 2010; Cushman & Hoffman 2004; Drummen 2010; Einstein & Infeld 1938; Engel, 1977; Garland 1928; Garrison 1929; Geanakoplos 1966; Illich 1995; Jackson 2002; Jary & Jary 1995; Kant 2004; Kempf 1905; King 2001; Krishnan 2010; Ligeros 1937; Magee 2005; Mallinger 1998; Mbitsakis 1978; Plaskettt 2004i; Proby 1975; Quirke & Gaudilliere 2008; Rae 1986; Reid 1996; Reitman & Shadt, 2007; Scarborough 1985; Seelig, [1905; 1908]; Smart 2000; Temkin 1962; The Rector et al 2009; Trivieri & Anderson 2002; Valier & Timmermann 2008; Vallance 1990; van Weel & Rosser 2004; Vesey & Foulkes 1990; Vorning 1997; Vryonis 1989; Wadhwa & Kapila 2008*). A number of treatises attributed to the ancient Greek philosophers Aristotle, Plato, Hippocrates, and Galen, were extensively studied in their original ancient Greek language and were subsequently compared and contrasted with translations and critiques by Greek and English language commentators. The main aim was to identify the various conceptual frameworks, developed by the ancient Greek polymaths and further expanded by subsequent scholars, and the different ways in which these have influenced Western medical thought during the last two and a half millenniums. The ancient Greek treatises of Aristotle, Plato, Hippocrates and Galen proved valuable sources of information on the role of diet and lifestyle in the maintenance of health and treatment of the patient in the ancient world. Important insights were extracted through searching the treatises in their original ancient Greek language, despite the fact that the unavailability of dictionaries in the ancient Greek-Ionian dialect -in which the majority of treatises are written- increased the burden of work and the length of time needed for their translation, (*Armstrong 1935[i-ii]; Balme 1991; Brock 1916; Brock 1923; Forster 1961[i-ii]; Goold [1916; 1928]; Goold 1961[i-iii]; Goold 1988[i-ii]; Goold & Balme 1991; Goold & Smith 1994; Goold & Potter 1995; Hatzopoulos 1992[i-xxii]; Henderson 1923[i-ii]; Henderson [1931; 1933; 1970]; Henderson 1935[i-iii]; Jones 1923[i-ii]; Jones 1931; Lypourlis [2000 & 2001]; Peck [1942; 1961; 1965; 1970]; Pentzopoulou & Petrou 2001; Potter 1988[i-ii]; Smith 1994; Tredenick [1933; 1935]; Withington 1928*).

Other areas investigated were those related to the reasons hiding behind the rising incidence of chronic disease, at increasingly lower ages, and the adequacy of the current systems of healthcare to provide effective solutions to contain this pandemic. , (*Egeberg 1968; Engel 1977; Carlson 1979; Starfield 1980; McCarty 1981; Gremy 1984; Hjortdahl 1992; Calman 1994; Illich 1995; Meryn 1998; Clark et al 1999; Levinson et al 1999; Vickers & Zollman 1999; Weisburger 2000; Zimmet 2000; Bottles 2001; Shai et al 2001; Beck et al 2002; Bodane & Brownson 2002; Fairfield & Fletcher 2002; Nahleh & Tabbara 2003; Barrett et al 2004; Casileth & Deng 2004; Cushman & Hoffmann 2004; Liska et al., 2004; Plaskettt 2004; Rastegar et al 2004; Yach et al 2004; Gremy 2005; Hyman et al., 2005; Royal College of Physicians 2005; Saultz & Lochner 2005; Vogel et al 2005; WHO [2002; 2002iii; 2003i; 2004i; 2005i; 2006; 2007ii; 2007ix; 2008; 2008ii]; EU 2005; Chang et al 2007; Dirkzwager & Verbaak 2007; Fallat et al., 2007; Percy-Smith 2007; Reitman and Schadt 2007; Patterson et al., 2008; Schenk et al 2008; Street et al 2008; Zachariadou et al 2008; Drewnowski 2009; Fiqueredo 2009; Gillies et al., 2009; Harris 2009; Shepherd 2009; Solomons 2009*). The role of evidence-based nutritional approaches in the prevention and treatment of chronic disease was also deeply investigated, as presented and validated by a volume of research, (*Ames 2006; Ames 2010; Balch & Balch 2000; Baldewicz et al., 1998; Ballentine, 1978; Barbagallo et al., 2007; Beckett & Arthur 2005; Benton & Donohoe 1999; Benyon 1998; Bereswill et al., 2010; Bland [2002 and 2004]; Bland 2004; Bodane & Brownson 2002; Bohager 2008; Bolland et al., 2010; Calvaresi & Bryan 2001; Carlsen et al., 2010; Cattaneo et al.,, 2001; Chakraborti et al., 2002; Chen et al., 2009; De Lau et al., 2006; De Roos et al., 2009; Duda et al., 2009; Elmali et al., 2007; Erasmus, 1993; Kris-Etherton et al., 2002; Fairfield & Fletcher 2002; Fenech 2001; Ferguson 2009; Ford 2001; Forestier et al., 2008; Frederickson et al., 2005; Garland et al., 2007; Garrison 1982; Garrow et al., 2000; Gawande et al., 2008; Glenville [1997; 2001; 2005]; Goldberg et al., 2002; Gonzalez-Gross et al., 2001; Gorelik et al., 2003; Green & Miller 1999; Guarner 2007; Guerrero-Romero & Rodriguez-Moran 2005; Gurusamy et al., 2008; Hanaway 2005; Harper & Jacobson 2001; Hasler et al., 2000; He et al., 2011; Hennen 1999; Herbert 2000; Higdon 2003; Holmquist et al., 2007; Hudson & Murray 2011; Jensen 1978; Jha et al., 2010; Jia et al., 2010; John et al., 2010; Jones et al., 2005; Kale et al., 2010; Karunakaran et al., 2007; Kellof et al., 2000; Kidd 1996;Kim et al., 2004; Knekt et al., 2002; Lakhan & Kirchgessner 2010; Lamson & Plaza 2002; Lassi et al., 2010; Leader & Leader 2006; Levin et al., 2006; Lewontin 2000; Ley 1998; Libby 2005; Linde et al., 1996; Lipton et al., 1979; Looijer-van Langen & Dieleman 2009;Lyon et al., 2005; Ma et al., 2005; Maczurek et al., 2008; Maes et al., 2009; Mandel et al., 2004; McCann & Ames 2009; McCarty [1981; 2000, 2000i]; McKay et al., 2000; McKenna et al., 2001; Meplan et al., 2007; Meydani 2001; Michaud et al., 2000; Molloy & Scott 2001; Muecke et al., 2010; Murray & Lyon 2003; Murray [1994i; 1994ii; 1996; 2002]; Murray et al., 2005i; Natural Medicines Comprehensive Database [1995-2011]; NIH et al., 2004; Obeid et al., 2007; Pan et al., 2009; Panayiotakos et al., [2007i 2007ii, 2009]; Papathanasopoulos & Camilieri 2010; Parkes et al., 2008; Pfeiffer [1975; 1972; 1987]; Pittler & Ernst 1998; Pizzorno & Murray 2006; Pizzorno et al., 2002; Plaskettt 2004 [i-xv]; Polychronopoulos et al., 2008; Proby 1975; Puchau et al., 2009; Quillin & Quillin 2005; Radhika et al., 2002; Rayburn & Friedman 2010; Reckeweg 1991; Reid et al., 2003; Reznichenko et al., 2010; Rideout et al., 2008; Robinson et al., 1998; Romieu & Trenga 2001; Sahley & Birkner 2001; Salinthone et al., 2008; Schauss 2011; Scholle et al., 2009; Schurgers et al., 2007; Sharma et al., 2007; Showell et al., 2011; Silva et al., 2010; Simopoulos 2002; Singh & Das 2011; Singh & Jialal 2008; Smith et al., 1996; Song et al., 2006; Song et al., 2009; Song et al., 2010ii; Soo et al., 2008; Steinbrecher et al., 2010; Stoll 1998; Taylor et al., 2002; Tenenbaum et al., 2008; Tunon et al., 2009; Vauzour et al., 2008; Verhaar 2002; Vogel et al., 2005; Vosper 2009; Wang et al., 2001; Wang et al., 2010; Watts 1995; Weber et*

al., 1996; Wei et al., 2009; Weisburger 2000; Werbach & Moss 1999; Werbach & Murray 2000; Werbach [1996, 1997, 1999 2002]; Wilner 2005; Wilt et al., 1998; Witte et al., 2001; Yamori et al., 1992; Yamori et al., 2010; Yarnell 2000; Zhou et al., 2009; Zoccolella et al 2007). In addition the extent to which evidence-based therapeutic nutritional interventions are effectively applied within contemporary settings of healthcare, was examined, particularly in the area of prevention and treatment of chronic disease, (*Vickers & Zollman 1999; Clifford 2000; Hark & Morrison 2000; Kolasa 2001; Shai et al., 2001; Taren et al., 2001; WHO [2002; 2002iii; 2004i; 2004ii; 2008]; EU 2005; Adams et al., 2006; Krebs & Primak 2006; Jeor et al., 2006; Kolasa & Rickett 2010;*).

The final part of the review probed into the academic, medical, and political perspective on the developments taking place during the first decades of the twenty first century at different levels, directly or indirectly related to the area of the provision of healthcare, in view of the worldwide awareness of the rising numbers of chronically ill people, at increasingly lower ages and with multiple, coexisting health problems (*Aujoulat et al., 2007; Avogo et al. 2008; Baer 2007; Barrett et al 2004; Ben-Arye 2010; Bland 2002; Bland 2004; Bland 2005; Bodane & Brownson 2002; Borrell-Carrio et al., 2004; Carlson 1979; Chang et al. 2007; Chen 2008; Cooper et al 1998; Cushman & Hoffman 2004; DeSylvia et al., 2008; Di Gianni et al., 2002; Di Sarsina 2007; Eisenberg et al 1998; Engel [1977; 1980]; Ernst et al., 2004; EU [2007; 2010i; 2010ii; 2010iii]; Galland 2005; Ginsburg & Willard 2009; Go et al., 2004; Guttmacher & Collins 2003; Guzman et al., 2002; Hakobyan et al. 2006; Harding et al., 2010; Hyman et al., 2005; IMF 2008; IOM 2008; Jones & Quinn 2005; Jones et al., 2005; Joos et al. 2009; Kaboru et al. 2006; Lamb 2005; Lane et al., 2005; Lee et al. 2002; Leichsenring 2004; Levin et al., 2006; Lewontin 2000; Liska 2005; Liska et al., 2004; Maes & Twisk 2010; Mahady 2001; Mann et al. 2004; Mears et al., 2010; Nahleh & Tabbara 2003; OECD 2010; Patterson et al 2008; Quirke & Quadilliere 2008; Risberg et al. 1999; Sampson et al. 2003; Snyderman & Williams 2003; Stange [2009; 2009i]; Sudak 2005; Sult 2005; Tang et al. 2008; Theodosopoulou 2010; Travakoli 2009; Unger et al., 2006; Vogel et al 2005; Weiner 2008; WHO 2003ii; Van Weel & Rosser 2010*

In an effort to enhance the objectivity of this part of the research, the greatest, by far, part of the publications reviewed represented self-evaluation and reflective practice by researchers, academics, and practitioners of the medical and pharmaceutical community itself, as well as official reports (*Aasland & Forde 2005; Adams [1904; 1904i]; Angell et al., 2009; Arnold 1927; Barret et al., 2004; Beck et al., 2002; Bolsin et al., 2005; Bottles 2001; Boyles et al., 2008; Bradley 1871; Brown [1917; 1929]; Bursztajn and Hamm 1979; Calman [1994; 2004]; Chang et al., 2007; Chheda et al., 2007; Clark et al., 1999; Cooper et al., 1998; Cordell 2004; Creighton 1880; Cushman & Hoffmann 2004; D' Souza 2008; Davis et al., 2002; Diller 1909; Di Sarsina 2007; Dock 1928; Egeberg 1968; Elsayed et al., 2008; Engel 1977; Ernst et al., 2004; Fallat et al., 2007; Faunce et al., 2004; Fessler 1950; Fiqueredo 2009; Fletcher & Fairfield 2002; Foster et al., 2008; Frasse 1907; Freeman 1997; Garland 1928; Garrison 1929; Gonghuan et al., 2008; Grone & Carcia-Barbero 2001; Hammer & Jonas 2004; Hampton 1997;*

Hanzlik 1927; Hark & Morrison 2000; Harris [1927; 1929]; Harris 2009; Hatch 2001; Hemmeter 1906; Hjortdahl 1992; Ingham 1929; Irvine 1997; Jacobson et al., 2005; Jeste & Vahia 2008; Jones et al., 2005; Joos et al., 2009; Juntunen et al., 2000; Kahn et al., 2008; Kassirer [1995; 1998]; Kellog 1928; Kempf 1905; Kennedy et al., 2007; Yarnall et al., 2003; Kress 1917; Langstroth 1928; Leibovici & Lievre 2002; Levinson et al., 1999; LInz et al., 2005; Ligeros 1937; Lin & Bauer-Wu 2003; Linz et al., 2005; Lockwood 1928; Saultz & Lochner 2005; Manian 1999; Mann et al., 2004; Mapother 1934; Mathew 2001; McArthur 1927; Mechanic 1996; Mechanic et al., 2001; Meryn 1998; Morrison 2000; Moynihan et al., 2002; Nahleh & Tabbara 2003; Nguyen et al., 2009; Ostbye et al., 2005; Paice et al., 2002; Palou et al., 2003; Pasamanick 1957; Patterson et al., 2008; Pimlott 2009; Pratter et al., 2006; Randall 1996; Rao et al., 2000; Rastegar 2005; Reitman & Schadt 2007; Roys 1913; Royal College of Physicians of London, 2005; Russ 1915; Rutheford 1867; Salinthone et al., 2008; Saultz & Lochner 2005; Schenk et al., 2008; Scott 1906; Seelig 1905; Smith 1947; Smith 1998; Smith & Taylor 1996; Sokol et al., 2008; Song et al., 2009; Southgate et al., 1998; Starfield 1980; Street et al., 2008; Tang et al., 2008; Thayer 1929; Theodosopoulou 2010; Vogel et al., 2005; Wann 2005; Warbasse 1904; Weeks et al., 2003; Witney 1928; Woolf & Akesson 2001; Woolf et al., 2004; Yach et al., 2004; Yarnall et al., 2003; Zachariadou et al., 2008)

4.2. INTERVIEWS

This part of the research was conducted between the months November 2007 and December 2008. Sixteen important key actors and decision makers from the whole spectrum of political, social and medical activity were interviewed, all being selected on the basis of their authority and power to contribute effectively to transformation and change within the area of medical activity in Cyprus. It is worth noting that the fact that I was involved for several years in the past as an elected high officer of one of the largest political parties of the country, as well as a member of the Board of Directors of a number of professional associations, proved to be a great advantage for this part of the research as most of the interviewees were either ex-colleagues, or have met them in some way in the past. This was instrumental in gaining easy access to, but also in establishing rapport with, these key actors, all of them with very heavy agendas.

Aiming to perform this activity on the basis of the highest ethical and professional standards, set at the onset of this action research, a few informal pilot interviews were conducted beforehand with friends and colleagues. The feedback gained from the evaluation of the results was used to finalise the structure and sequence of questions. In consequence, all interviewees were

informed in writing about the aims of the researcher, the reasons of the interview, and the issues to be discussed. A formal letter was sent to each one of them, including a few words about the researcher's academic and professional background, the title and aims of the project, and an indication of the questions to be asked. Reference was made in the letter to the fact that the interview was part of a Doctorate Thesis. In addition, a short briefing on evidence-based worldwide concerns on the rising incidence of chronic disease, published by national and international organisations, as well as an introduction to Nutritional Medicine as a tool for prevention and treatment of chronic disease, were attached. It was specifically stressed in the letter that the interviewee did not need to have any specific technical knowledge on medical terms and theories, and that the discussion would focus on obtaining their opinions and beliefs, on the basis of the knowledge they possess on the subject from their involvement in the area under study, (*Appendix 10*)..

The time estimated for each interview was one hour and this time was requested in advance in the formal letter sent to the interviewees. Some of the interviews took less than an hour, and these were the cases in which respondents were relatively brief and to-the-point in their responses. Most interviews took place in the interviewees' offices, except from one which took place in my clinic. They were all taped with an Olympus digital voice recorder, with the interviewees' consent, who unanimously appeared to prefer this method as saving valuable time and being more reliable in terms of accuracy of recording. All interviewees were informed in advance that the discussion would be transcribed and subjected to discourse analysis for the purposes of a doctorate thesis. Care was taken for the case of any of the interviewees refusing the taping. A notebook was carried and all questions were written in a specific format on separate sheets to allow for responses –including non-verbal ones. However, no notes were needed to be taken, since this method was considered as obstructing the natural flow of the discussion and affecting negatively the friendly atmosphere which was established during the interview. All interviews were conducted in a relaxed manner and in the majority of cases

the discussion was not strictly contained within the pre-structured format, for several reasons, including: interest expressed for more information about 'what Nutritional Medicine is', and the currently rising worldwide awareness on the issue under study.

All questions (*appendix 10*) were semi-structured and open-ended, offering respondents the freedom to expand on each one of them and express their opinion without leading them to a specific answer. Some of the questions were intentionally designed to be provocative, aiming to stimulate the discussion and excite controversy. The transcription of the taped interviews proved to be a time-consuming procedure and it was assigned to my assistant in the clinic who quoted down the interviews exactly as taped. Olympus DSS player software was used for the transcription. All interviews were downloaded on the software and speech speed was adjusted to fifty percent during the transcription.

Qualitative discourse analysis of the majority of the transcribed texts, followed on the basis of the insights obtained through reviewing relevant literature on analysis of discourse, (*Widdowson 1995; Brown & Yule 1983; Cohen et al., 2000; Alvesson & Karreman 2000; van Dijk 1993 & 1998; Slembrouck [2001; 2006]*). It is worth to note that discourse analysis is a much debated concept in literature due to 'the so many conflicting and overlapping definitions formulated from various theoretical and disciplinary standpoints', (*Widdowson 2005*). Different theorists introduce different conceptual frameworks and theorisations into the analysis of discourse, in an attempt to extract meanings from the written and verbal word that are not evident through conventional reasoning and interpretation. Hence, the definitions of discourse analysis are inexhaustible: Stubbs (*1983:1*)[1], defines it as 'language use beyond the boundaries of a sentence/utterance' and 'the dialogic properties of everyday communication'; Slembrouck (2006) as 'social action', 'situated performance', and 'as tied to social relations and identities,

[1] Quoted by Stef *Slembrouck* 2006

power, inequality and social struggle'; Potter *1997:146*)[1] as 'analysis of what people do with language in specific social settings'; Austin (*1962*)[2] claims for a clear distinction between 'locution' (decontextualised utterance) and 'illocution' (an utterance which by its use in a specific context is loaded with an amount of force) (*Slembrouck 2006*).

Fairclough (2005) defines discourse as 'the structure of social interaction manifested in conversation' and identifies 'semantic relationships between constructed pairs of sentences and their syntactic realisations' (*Fairclough 2005*). Widdowson 2005, argues for a 'plurality of discourses' explaining that the same text can give rise to different discourses by deriving meanings with reference to contextual conditions, beliefs, attitudes and values which represent different versions of reality. Thus, according to Widdowson, every interpretation represents only a partial interpretation from a particular point of view. 'It is partial because it is ideologically committed and thus prejudiced; and it is partial because it selects those features of the text which support its preferred interpretation'. Thus interpretations of spoken and written language can be affected by the context in which it was produced, the intention of the producer and the intention of the different listeners or readers, their divert views of reality as shaped by their society or their family, or their preconceived ideological commitments (*Widdowson 1995*).

In view of all above insights gained –and much more not included in this report due to word count limits- the discourse analysis of most of the interviews was conducted within the context of a 'no science is value-free' conceptualisation, on the basis of a *constructivist epistemology.* The transcribed texts were subjected to qualitative evaluation taking into consideration not only 'what was discussed' but also 'how it was discussed' in an attempt to extract not only factual information on existing and planned policies but also the views, deeper beliefs, prejudices, and hidden motives of the respondents, as well as a

[1] Quoted in Alvesson & Karreman 2000
[2] Quoted by Stef *Slembrouck* 2006

representational perspective of how commodities of power are distributed in the area of research.

4.3. SURVEY

I conducted the survey during the period October-December 2008, with the support of the Center of European and International Affairs of the University of Nicosia. The data collection was conducted with personal interviews, using a structured questionnaire (*appendix 1*) which I prepared and which was administered by the Center of European and International Affairs to a randomly stratified, sample taken from the adult population of the five districts of Cyprus, Nicosia, Limassol, Famagusta, Paphos, and Larnaca, (excluding the Turkish occupied area). The sample consisted of:

- Population: 465 adults
- Ages: 18-88 years
- Gender: 43.2% males and 56.8% females.
- Residence: Urban 70.5%; rural 29.5 %
- Education: Elementary: 20.2%; High school: 54.8%; College/University: 24.9%
- Family status: Married: 74.6%; Single: 18.3%; Widowers: 3.0%; Divorced: 4.1%

The following activities were carried out by myself, exept where is is otherwise stated:

- Consulting textbooks

  A number of textbooks and other publications were reviewed for guidance on how to conduct the survey and obtain valid and reliable answers to a number of preset research questions, (*Bell 2005; Cohen et al., 2000; McNeill 1990; Robson 2002; Salant & Dillman 1994; Seal et al., 2007; Silverman 2006; Papanastasiou & Papanastasiou 2005; Warnecke et al., 1997*) .

❖ Consulting a statistician

I had two subsequent meetings with Statistician Dr Elena Papanastasiou who provided valuable technical insights (coding, numbering, listing of questions, type and sequence of answers etc) so that it could be easily converted to variables and effectively subjected to statistical analysis.

❖ Writing down the research questions

I wrote down a number of research questions before the preparation of the questionnaire as presented in the table below:

Research questions for the survey

1. **Incidence and frequency of different chronic diseases as viewed by Cypriots**
2. **Preference of type of therapy for chronic health problems?**
3. **To what extent are Cypriots willing to follow a strict diet instead of drug-intake in order to cure a chronic health problem?**
4. **How many Cypriots and who (in terms of age, education and financial status) use nutritional approaches to treatment of a health problem?**
5. **What kind of nutritional supplements and to what extent these are used by Cypriots?**
6. **Do Cypriots get advice for their nutritional supplements and who advises them?**
7. **What are Cypriots' perceptions of health and to what extent these perceptions coincide with those traditionally held by Conventional and Wholistic medical philosophies (as Nutritional Medicine) respectively?** [1]
8. **Do Cypriots feel free to discuss their health problems, and are they allocated adequate time, during consultations with their doctor?**

[1] *Studies demonstrate that people think they are healthy if they are just relieved from their symptoms, often taking drugs lifelong. For example: About three quarters of Cypriots believe they are in 'good' or 'excellent' health and only 2% report as being in 'not good' health, despite evidence demonstrated by surveys of the Ministry of Health e.g. heart disease being the main cause of death in Cyprus; more than half of Cypriots suffering from cholesterol; obesity rates significantly higher than EU average; and tobacco consumption at 68% higher than EU average,*)*Golna et al., 2004*). *Evidence also demonstrates a lower HALE*)*healthy life expectancy*) *among Cypriots than other Europeans*)*life in illness longer by 2 years, compared to European average,*)*WHO 2006*).

9. What are the lifestyle habits of Cypriots (exercise, smoking)?

❖ Preparing the questionnaire (*appendix 1*)

In preparing the questionnaire, attempt was made to write down clear, well understood questions, with answer choices clearly defined and mutually exclusive, so that the respondent could find exactly what s/he wanted to answer in one of the choices. Open ended questions were not included. Care was taken to avoid leading questions.

❖ Comparing research questions with questionnaire

During the process of constructing the questionnaire, the questions were recurrently compared and contrasted with research questions. Alterations, additions and removals of questions were made several times and discussed with the statistician and the consultant until a satisfactory questionnaire was formed with a good potential to obtain answers to all research questions.

❖ Pilot studies

I conducted three pilot studies using the initial questionnaire, two within the University of Nicosia with the support of the Center of European and International Affairs, and one with friends and family members. I made subsequent modifications to the questionnaire on the basis of the feedback obtained from the studies (*appendix 12*). The revised form of the questionnaire was again subjected to critical evaluation and the final version was sent to the Center of European and International Affairs to be administered.

❖ Statistical analysis and evaluation

The results were subjected to statistical analysis in cooperation with the statistician with the use of SPSS 16. The analysis yielded descriptive statistics (means, standard deviations, percentages) to describe the sample results and inferential statistics (e.g. correlations) in order to generalise

the results to the population. After evaluating the results provided by the statistical analysis, further analysis was carried out in order to obtain deeper insights from the survey. A number of variables were subjected to cross tabulation. I prepared all tables and charts presented in this Report and the Evidence of Achievement on excel sheets on the basis of the SPSS 16 analysis provided by the statistician. Cohen et al., (2000) stress the value of correlational research which leads to a fuller understanding of the complexity of human behaviour by 'teasing out', not only relationships between variables but also directions and magnitudes of these relationships (*Cohen et al., 2000*). The results were critically evaluated and interpreted on the basis of the research questions of the survey. It is worth noting that more useful themes were extracted from the survey, in addition to the preset research questions. The findings from the survey were further subjected to triangulation with those from the other three research techniques.

4.4. CASE STUDIES ANALYSIS

A number of case studies were selected, out of a volume of patient consultations available in my clinic and were subjected to qualitative analysis. This part of the research was conducted after reviewing relevant literature (*Yin 2003; Armstrong 1997; Cohen et al., 2000*) on how to analyse and synthesise the bulk of information contained in each case. Taking into consideration potential ethical issues that could arise from the use of these data, (*as discussed in the Chapter Three*), the written consent from all patients, whose cases were subjected to analysis and anonymous publication, was obtained, (*appendix 11*). Evaluating different methods suggested by Yin (2003), the *cross-case synthesis* was selected as the most appropriate to extract adequate insights and themes that could be used for the promotion of the aims of the project. The selection of cases to be subjected to analysis was carried out in five stages with the major selection criterion being the degree of adherence to the prescribed treatment.

1. Stage 1: A search through the files of the clinic in order to identify the number of all patients who visited the clinic during the last five years for a treatment. Final number: six hundred cases.

2. Stage 2: An investigation of each of the six hundred patients' files in order to identify those who came back for at least one consultation after receiving their prescription. Patients who just disappeared after they received their treatment, or decided not to continue, were not included. This represented an effort which took several days and a total of three hundred and fifty cases were selected,

3. Stage 3: A profound examination into the details of each of the three hundred and fifty cases in order to identify those patients who completed their treatment to a satisfactory degree as prescribed. The major selection criteria for this stage were the degree of adherence to the principles of the prescription, and the number of consultations which followed receipt of the prescribed treatment. This represented a total of hundred and twenty cases. This stage took also several days to be completed

4. Stage 4: Due to limitations in time and scope of this project fifty cases out of the hundred and twenty were further selected. The method of selection was the following: Each case was numbered and the fifty numbers were randomly picked out from a box

5. Stage 5: The fifty cases were subjected to cross-case synthesis and evaluation. This technique was used to create word tables that went beyond the single features of a case and allowed the formation of subgroups or categories of cases that shared similarities. An important feature of this technique, stressed by Yin (2003), is the strong reliance of the examination of word tables for cross-case patterns, on argumentative interpretation and not numeric tallies. The method is paralleled to cross-experiment interpretations, which also have no numeric properties, especially when the number of experiments available for analysis is small.

Yin draws the attention of the investigator to the challenge he/she has to face on how to develop strong, plausible, and fair arguments that are supported by the data (*Yin 2003*).

In conclusion, using multiple sources of evidence in this project provided the possibility of triangulation of findings. The importance of triangulation in strengthening evidence in research is stressed by a number of authors, (*Cohen et al., 2000; Bell 2005; McNiff et al., 2003; Robson 2002; Yin 2003; Cagnon et al., 2008, Kristensen et al., 2008*). Cagnon et al., (2008), claim that a multi method approach is an appropriate strategy which allows the study of a complex phenomenon within its social, political and historical context (*Cagnon et al., 2008*). In this research some findings were uniquely extracted from only one methodology, but the majority of them were triangulated from four different perspectives:

1. **The Historical/Academic: Literature review**
2. **The Political/Organisational: Interviews**
3. **The Social/Public Opinion: Survey**
4. **The Clinical/Work-based: Case studies**

A patient's detailed case study, including all consultations, was included in <u>appendices 14-19</u> as an example of how Nutritional Medicine is practiced. All necessary steps to ensure anonymity were taken

5. FINDINGS

NOTE: Evidence in literature can be found in the relevant sections in:

- **Chapter 2. Literature Review of this Report and**
- **EVIDENCE OF ACHIEVEMENT (an integral part of the Report)**

Guiding references are included in the text accordingly

5.1. OBJECTIVE ONE-THE CONTEXT AND CONDITIONS

To investigate and critically evaluate the context and conditions, in the western world generally and in Cyprus particularly, within which Nutritional Medicine attempts to secure a respectable position along the spectrum of contemporary medical practice. To evaluate public and political perceptions in Cyprus on these issues

5.1.1. Finding One

A high awareness, for the rising incidence of chronic (non-communicable) disease and its heavy burden on the quality of life of people, especially those belonging to the most deprived groups of the society, evident in literature was also confirmed by my research in Cyprus.

For evidence in literature on Finding One please refer to:

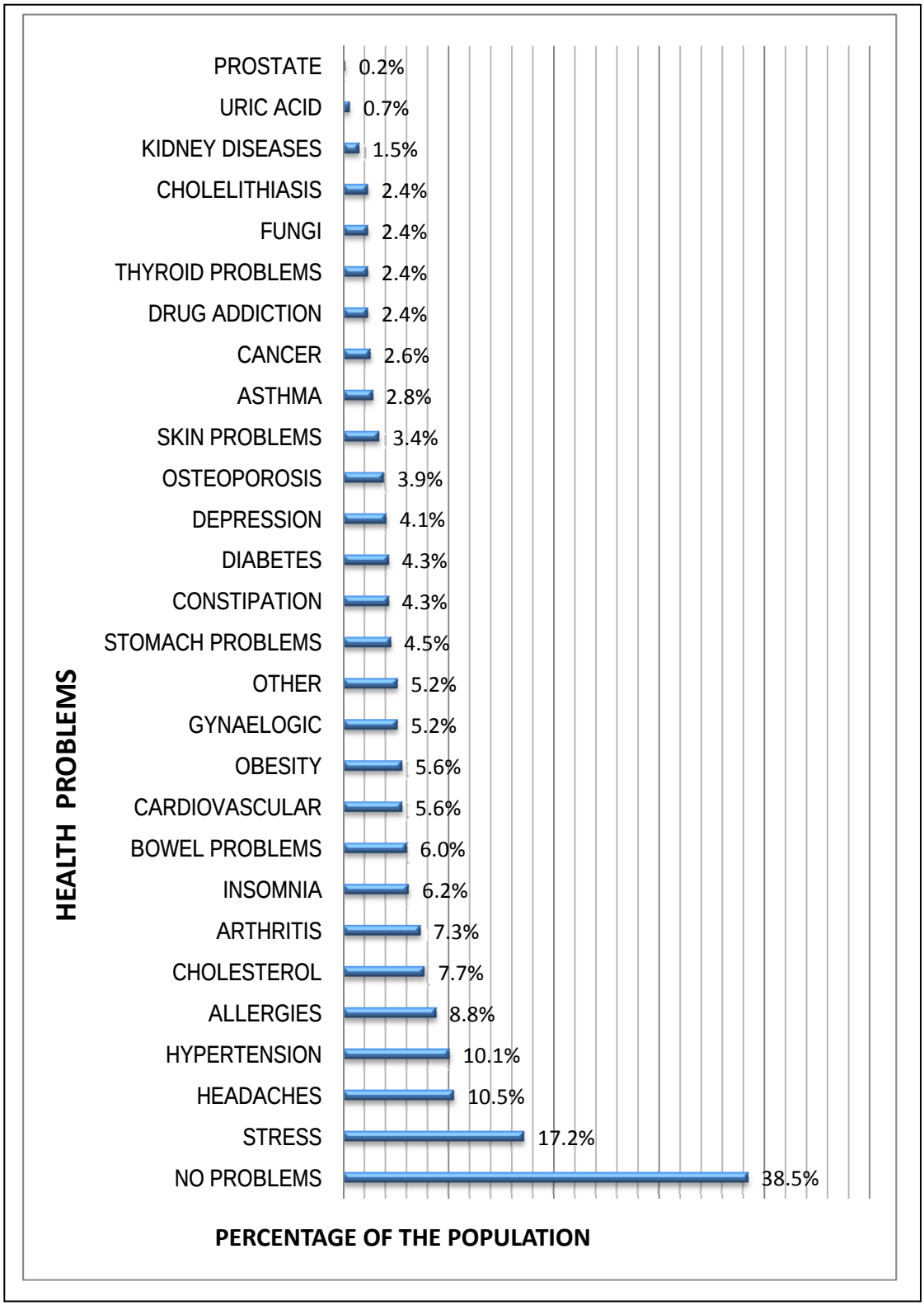
THIS REPORT,
- Chapter 2.1. *INTRODUCTION*
- Chapter 2.4*: CONTEMPORARY HEALTHCARE-A critical appraisal*

The EVIDENCE OF ACHIEVEMENT
- Part I: IDENTIFYING THE PROBLEM
  - Chapter I: *Health and Disease Facts*
  - Chapter II*: Perceptions of Health*

The high awareness evident in Literature (see **textbox above**) was further confirmed by the Interviews with key actors in Cyprus, in their replies to the first question addressed to them as follows: '*How does your Organisation/Party/Association encounters these worldwide concerns in the case of Cyprus?*' Serious concerns were particularly raised for the rising incidence of child obesity by the Officials of the Ministry of Health who stated that action is already being taken through a series of programmes. The Officials of the Health Insurance Organisation (HIO), which was set up under Law in 2001 with a mission to implement a new National Health System stated that action is in their future plans, when the new system is established. Some of the politicians referred to a number of measures and plans for action promoted by their parties/associations towards the Government. In particular, the representative of one of the Patients' Associations expressed high concerns for the rapidly increasing incidence of diabetes in Cyprus, referring to an epidemiological study in 2004 which demonstrated that diabetes affects more than a tenth (10.3%) of the population. Further concerns were raised that this percentage is much higher because many people do not know they are diabetic, and special awareness was demonstrated about child diabetes as the result of unhealthy diet, child obesity and sedentary life.

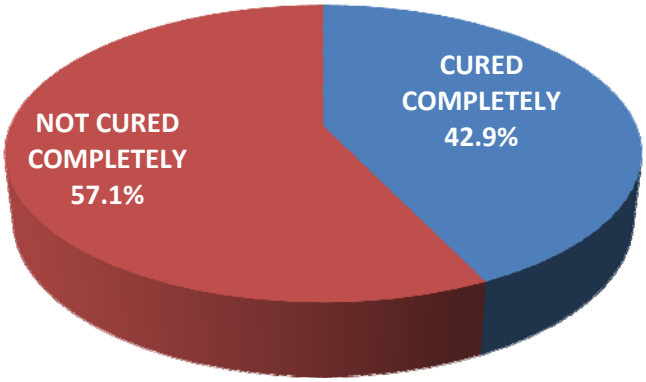
An important parameter of Finding One was that people although demonstrated by evidence in literature that they live longer than in the past, however, their lives are not healthier, confirming the particularly low Healthy Life Expectancy amongst Cypriots presented in official reports. From the results of the Survey, as shown in Chart below (**Chart 1: Percentage of the population with health problems)** in the question 'Do you suffer or suffered in the past from any of the following health problems?' ***(Appendix 1, Question 16)***, 61.5% of Cypriots stated as suffering now or suffered in the past from one or more chronic health problems, with 38.5% of them stating as never had in the past, or have now, any health problems: (see *next page*)

CHART 1: PERCENTAGE OF THE POPULATION WITH HEALTH PROBLEMS



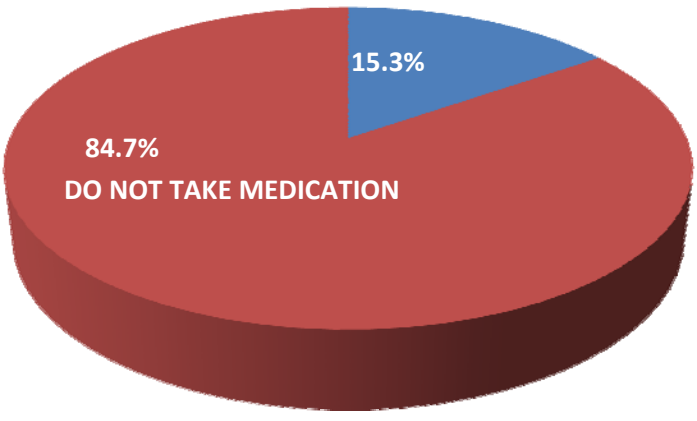
However, further statistical cross tabulation of the results revealed a number of facts not observable at first sight. In particular 57.1% of those who stated that were treated for one or more health problems also state as 'not cured completely' while only 42.9% of them stated as 'cured completely' (**Chart 2: Percentage of persons cured completely after treatment)**

CHART 2: PERCENTAGE OF PERSONS CURED COMPLETELY AFTER TREATMENT



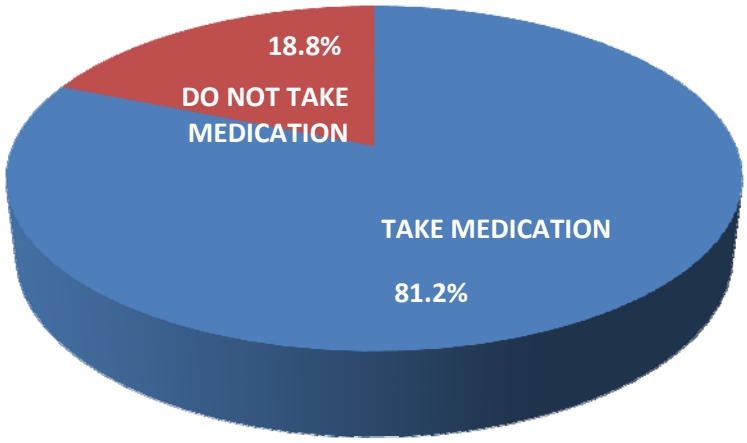
From those stating as 'cured completely' 15.3% continue to take medication (**Chart 3: Medication and persons who claim they were cured completely**). In other words only 36.3% of those who were treated for one or more health problems stated as 'completely cured' and 'not taking any medication', (84.7% X 42.9%) .

CHART 3: MEDICATION AND PERSONS WHO CLAIM THEY WERE CURED COMPLETELY



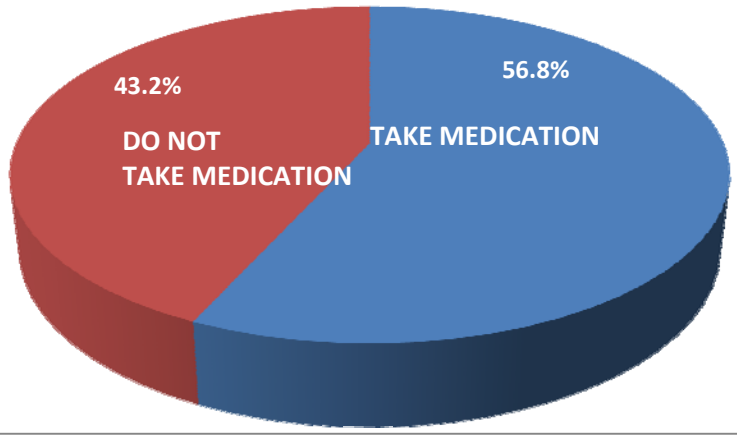
Furthermore, from those stating as 'not completely cured after treatment' 81.2% still take medication, while 18.8% stopped their medication without being cured (**Chart 4: Medication and persons who claim they were not cured)**

CHART 4: MEDICATION AND PERSONS WHO CLAIM THEY WERE NOT CURED



A paradox found is that, 56.8% of those stating as never had in the past, or have now, any health problems, take medication (**Chart 5: Medication and persons who claim have no health problems)**

CHART 5: MEDICATION AND PERSONS WHO CLAIM HAVE NO HEALTH PROBLEMS



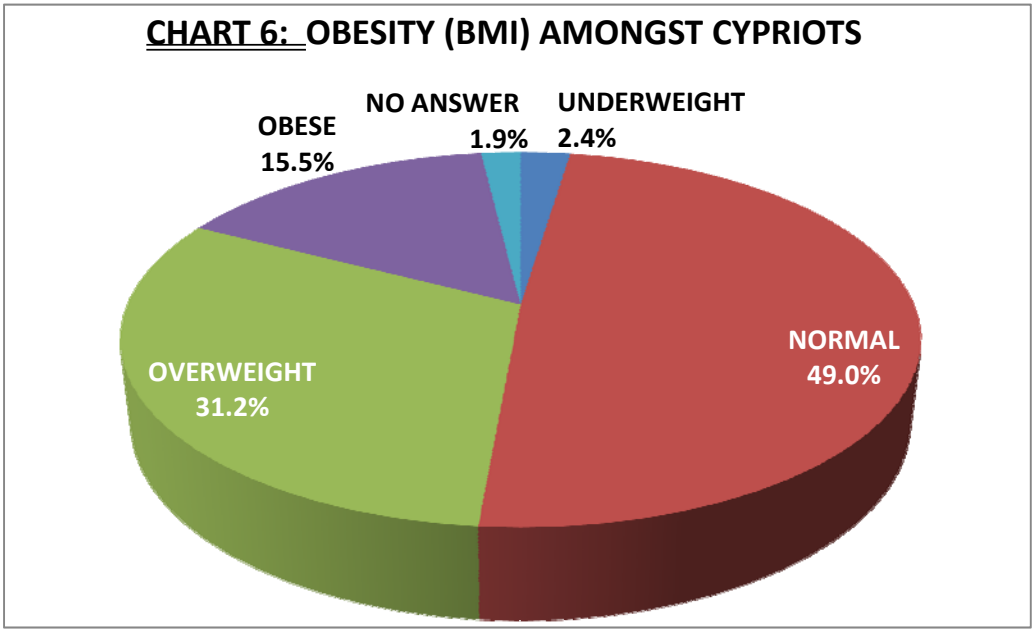
Another paradox is that 15.3% from those stating as being 'completely cured after treatment' of a health problem, still take medication (**Chart 3: Medication and persons who claim they were cured completely)**:

Above paradoxes, which appear to be related with the way 'health' is perceived, demonstrate that for many people health is synonymous with 'no symptoms' through effective management of disease, often taking medication for long time or, not infrequently, for the rest of their life. This paradoxes –which are discussed in more detail in the ***EVIDENCE OF ACHIEVEMENT, Part I, Chapter II: Perceptions of Health*** appear to explain the low reported levels of some chronic diseases in the Survey (much lower than official statistics above), such as only 7.7% stating as suffering with high cholesterol and 10.1% with hypertension, as demonstrated above in **Chart 1: Percentage of population with health problems.** Apparently taking long-term medication that reduces cholesterol and hypertension is perceived as 'cure'. The example of hypertension, which is considered by official reports as one of the 'most frequent long-standing health problems faced by Cypriots', (*Cyprus Statistical Service 2003*) and which is widely known to be successfully controlled, to a large extent, with life-long medication, is characteristic of the view that eliminating the symptoms equals to 'free of disease'. The high use of medication for the control of cardiovascular disorders, as is hypertension, is confirmed by official statistics which show that 41.5% of prescribed drugs in Cyprus are used for cardiovascular problems (heart, blood vessels or blood pressure), (*Cyprus Statistical Service, 2003*). Worth noting is the use of analgesics (painkillers), typical medicines for symptom relief, which represent the 46.6% of prescribed medicines in Cyprus, (*Cyprus Statistical Service 2003*).

Other researchers before this Survey have also identified this paradox. In the year 2002, 73.2% of Cypriots stated as being in 'excellent' or 'very good' health in spite of official reports of the previous year demonstrating that 62.9% of men and 46% of women suffered with high cholesterol, (*Golna et al., 2004*). Similarly, in a more recent European study on Health Perceptions, 81%

of Cypriots stated as in 'very good' or 'good' health, figuring amongst the first four European countries, (*EU 2009i-Table Health perceptions*). This again, appears to contradict evidence showing that Cypriots have one of the lowest HALEs in Europe, (*WHO 2006iv, fig. LE & HALE, p.5*); more than one fifth of them suffer with hypertension, (*Golna et al., 2004*); and one fifth of them with a psychiatric disorder -reported as the highest cause of disability in Cyprus (*WHO 2006iv, table, p.6*); and Cyprus being included in the high risk regions for cardiovascular disease, (*Zachariadou et al., 2008*) which according to the Ministry of Health, accounts for 40% of all deaths (*MOH 2008, p.15*).

A second parameter of Finding One was related to the levels of obesity amongst the Cypriot population which appear very high, confirming evidence in literature. As demonstrated below (**Chart 6: Obesity (BMI) amongst Cypriots)** almost half of the Cypriot population (46.7%) are overweight or obese (31.2% and 15.5% respectively):



Another paradox was also identified here related to a gap evident between the actual percentages of obese Cypriots (15.5%), which was derived by working out height and weight values, (**Chart 6: Obesity (BMI) amongst Cypriots**) and those derived from their statements (5.6%) as in **Chart 1:**

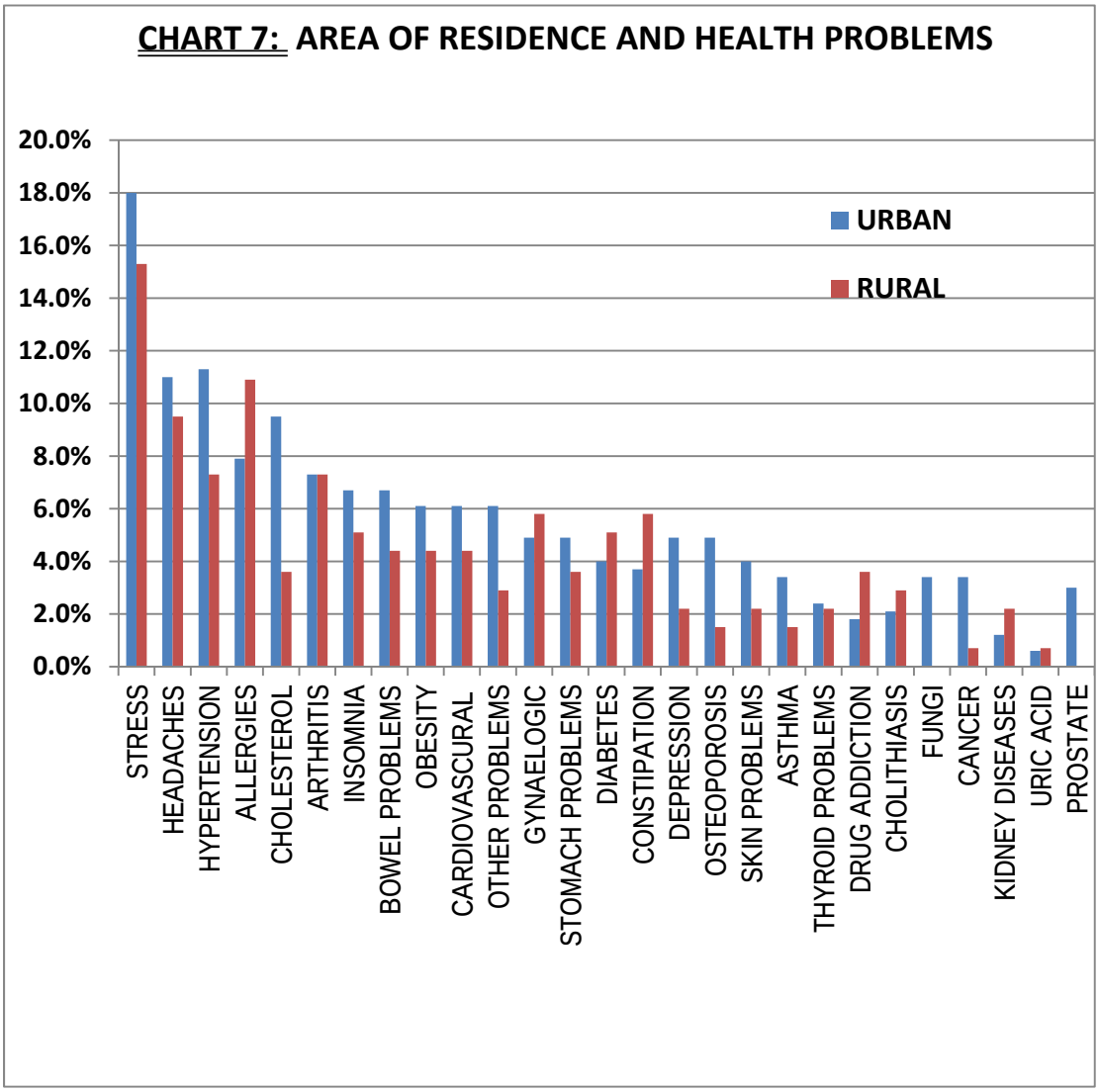
Percentage of the population with health problems. This paradox demonstrates once again the difference between *definitions* and *perceptions* of health. The strong positive correlations between obesity and chronic disease evident in literature were also confirmed by the Survey: with hypertension, high cholesterol, cholelithiasis, depression, fungal infections, diabetes, arthritis, cardiovascular disease, and insomnia (*at 1% significance level-2-tailed*); and with cancer, thyroid problems, and digestive problems (*at 5% significance level-2-tailed*). Particularly strong positive correlation was found between obesity and drug addiction (**Table 1a: Correlations between BMI and Health Problems)** (*further discussion on BMI and chronic disease in following findings*)

TABLE 1a: CORRELATION BETWEEN BMI AND HEALTH PROBLEMS

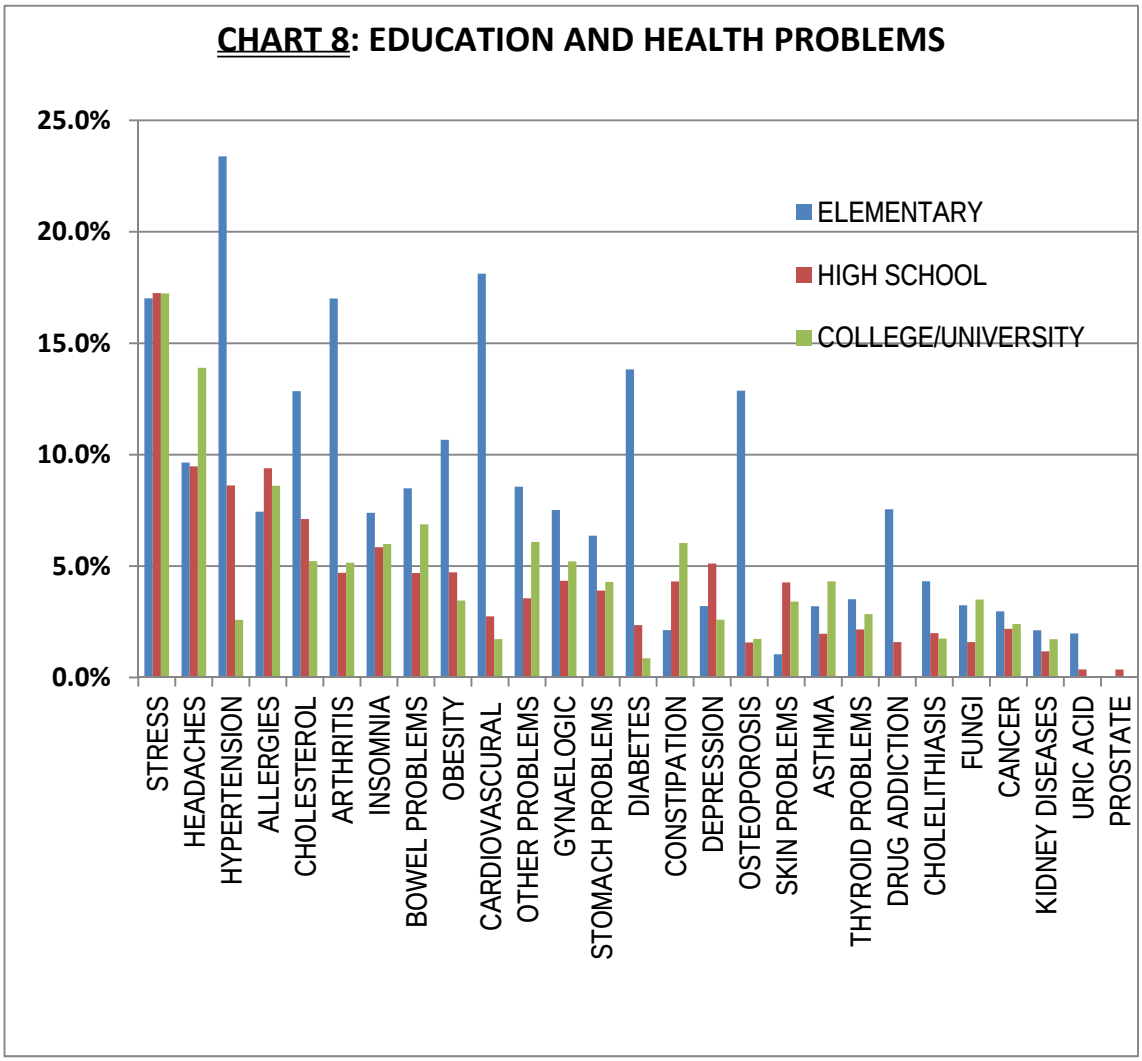
HEALTH PROBLEM	PEARSON CORRELATION	SIGNIFICANCE (2-TAILED)	CONCLUSION
DRUG ADDICTION	0.320	0	YES AT 0.01 LEVEL
HYPERTENSION	0.263	0	YES AT 0.01 LEVEL
HYPERCHOLESTEROLEMIA	0.195	0	YES AT 0.01 LEVEL
CHOLELITHIASIS	0.177	0	YES AT 0.01 LEVEL
DEPRESSION	0.173	0	YES AT 0.01 LEVEL
FUNGI	0.156	0.001	YES AT 0.01 LEVEL
DIABETES	0.149	0.001	YES AT 0.01 LEVEL
ARTHRITIS	0.146	0.002	YES AT 0.01 LEVEL
CARDIOVASCULAR PROBL	0.135	0.003	YES AT 0.01 LEVEL
INSOMNIA	0.130	0.005	YES AT 0.01 LEVEL
CANCER	0.113	0.015	YES AT 0.05 LEVEL
THYROID PROBLEMS	0.099	0.032	YES AT 0.05 LEVEL
STOMACH PROBLEMS	0.095	0.041	YES AT 0.05 LEVEL

The third parameter of Finding One was a positive association between socioeconomic status (such as area of residence, income, education and family status) and disease. The Survey provided adequate evidence to support this part of Finding One:

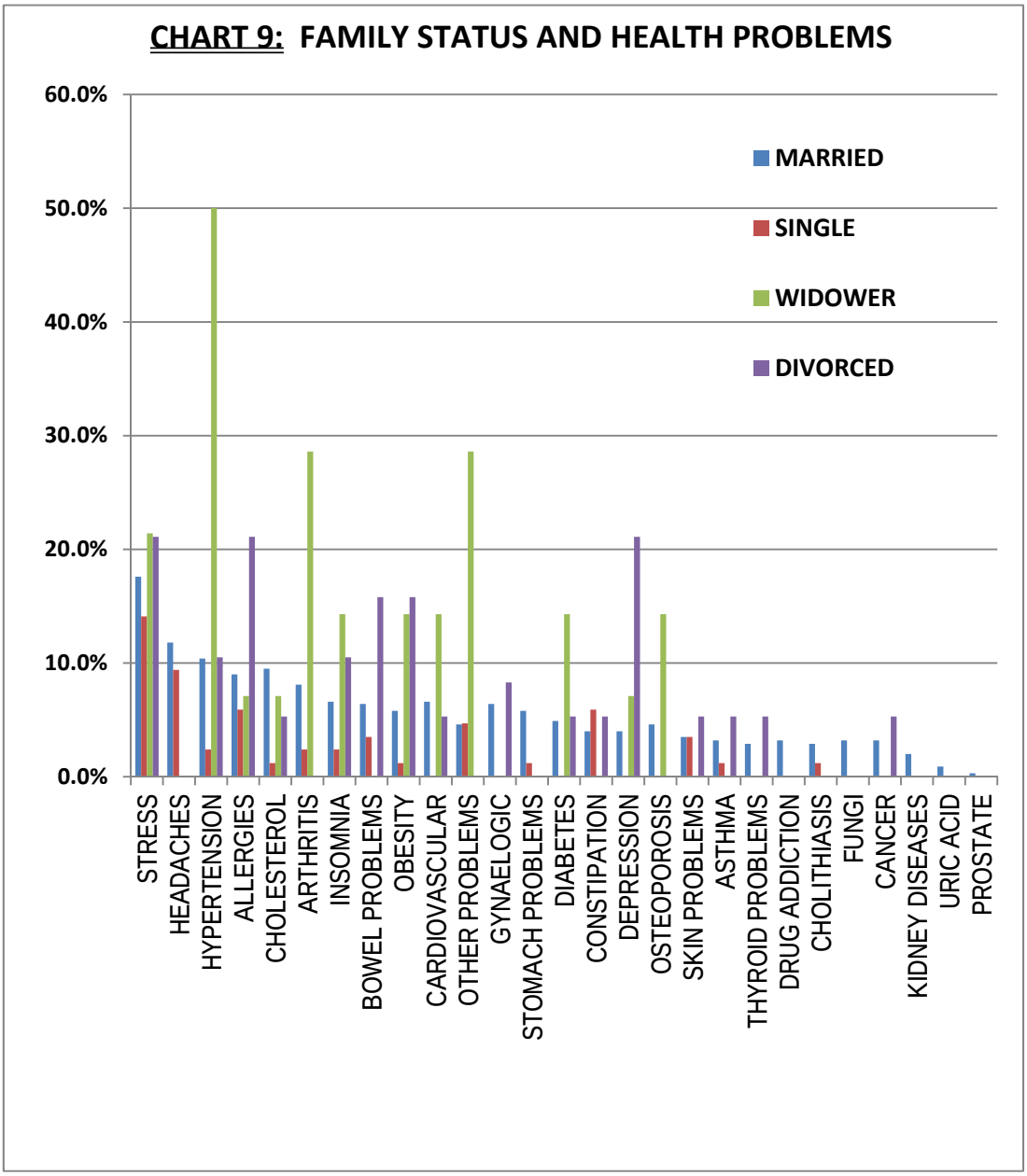
More specifically, the Area of residence was found to be an important factor related to chronic disease incidence (**Chart 7: Area of residence and Health Problems).** Cancer, prostate, fungal infections, hypertension, hypercholesterolemia, bowel problems, obesity, cardiovascular disease, depression, osteoporosis, skin problems, and asthma, appear much more frequently in urban areas rather than rural. In contrast, drug addiction, constipation, allergies, and kidney disease are more frequent in rural rather than urban areas. A number of common health problems, occur in both areas with smaller differences, such as arthritis, gynaecological disorders, stomach problems, diabetes, thyroid problems, cholelithiasis and uric acid disorders. Worth noting is that some problems, such as stress, headaches, and insomnia appear in both areas, with small differences, (*further discussion on Area of Residence and chronic disease in subsequent findings*)



Education level was found to be strongly negatively related to health problems, which appear to occur more frequently among those with elementary education, falling gradually at high school graduates and further reduced at college/university level (**Chart 8: Education and Health Problems**). Greater gaps were indentified in diseases, such as cardiovascular disease, hypertension, diabetes, osteoporosis, drug addiction, arthritis, hypercholesterolemia, obesity, cholelithiasis, and uric acid disorders. Stress appears equally at all levels, whilst headaches and constipation are more frequent among college/university graduates. Depression is more frequent in high school graduates (*further discussion on Education and chronic disease in following findings*)



As regards family status, although it was not possible to reach concrete conclusions for all categories, such as the Singles, and Widowers who fall in younger and older ages respectively, a very important finding is that the percentage of Divorced suffering from depression is as high as 21.1% compared with only 4% in those married, and 7.1% in widowers. None of the single people interviewed stated to suffer from depression (**Chart 9: Family status and Health Problems) (***further discussion on Family Status and chronic disease in following findings)*

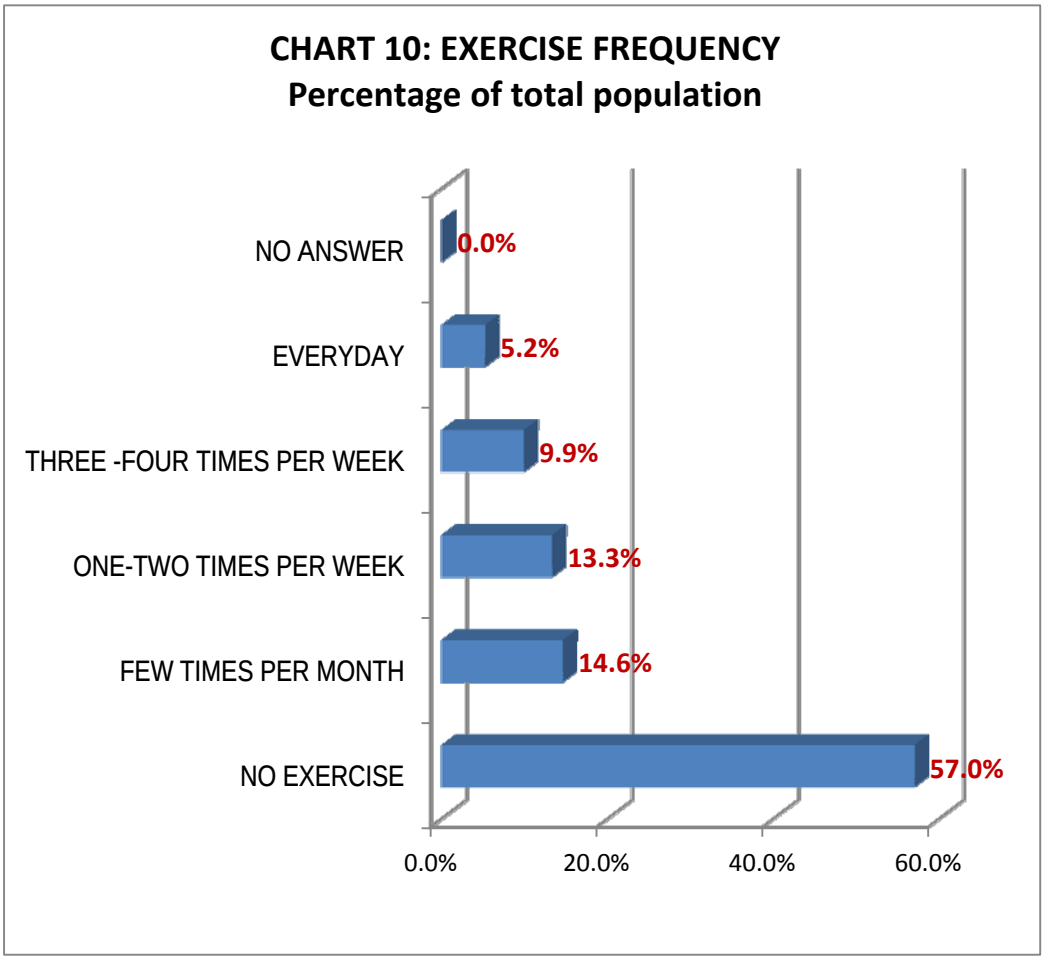


Family income was also found to be negatively related to the incidence of chronic disease demonstrating that the higher the family income, the smaller the incidence of chronic disease (**Table 3: Family Income and Health Problems)**. Strong negative correlations were found between family income and arthritis, cardiovascular problems, and other problems (*at 1% significance level 2-tailed*); and with stress, skin problems, drug addiction, and cancer (*at 5% significance level 2-tailed*).

TABLE 3: FAMILY INCOME AND HEALTH PROBLEMS

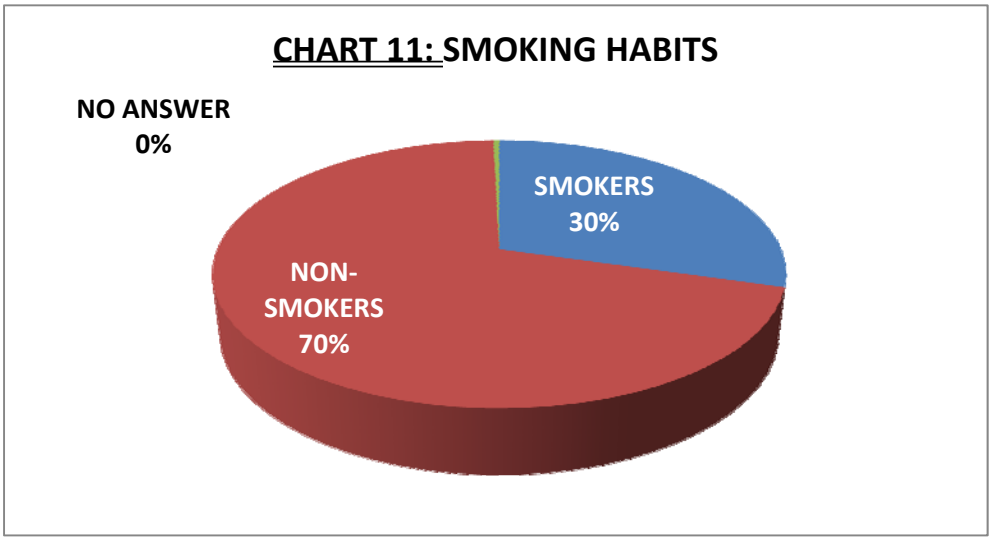
HEALTH ISSUE	PEARSON CORRELATION	SIGNIFICANCE (2-TAILED)	CONCLUSION
NO PROBLEMS	0.201	0	YES AT 0.01 LEVEL
ARTHRITIS	-0.135	0.004	YES AT 0.01 LEVEL
CARDIOVASCULAR PROBL.	-0.13	0.005	YES AT 0.01 LEVEL
OTHER PROBLEMS	-0.145	0.002	YES AT 0.01 LEVEL
STRESS	-0.103	0.028	YES AT 0.05 LEVEL
SKIN PROBLEMS	-0.098	0.037	YES AT 0.05 LEVEL
DRUG ADDICTION	-0.117	0.012	YES AT 0.05 LEVEL
CANCER	-0.106	0.024	YES AT 0.05 LEVEL

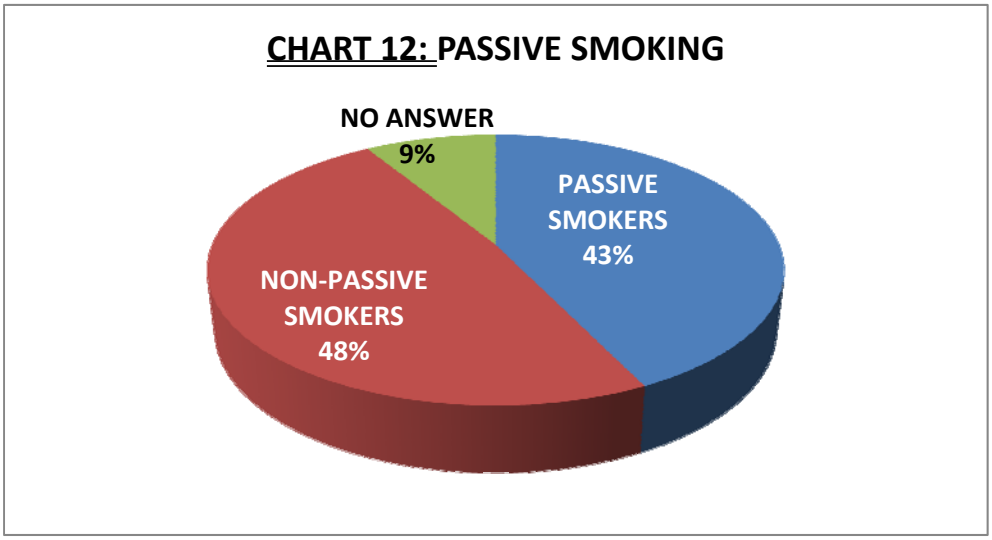
The fourth parameter of Finding One relates to the identification of a very unhealthy way of life amongst Cypriots, who appear to have also abandoned their traditional Mediterranean diet for unhealthy fatty food, *(Golna et al., 2004; Antoniadou 2005),* increasing the prevalence of disease such as cancer and cardiovascular disease *(Antoniadou 2005; Golna et al., 2004).* The Survey confirmed the tendency to sedentary and unhealthy lifestyle habits. As regards exercise it was particularly demonstrated (**Chart 10: Exercise Frequency)** that more than two thirds of the Cypriot population (71.6%) never exercise (57.0%), or exercise only a few times per month (14.6%), with only 15.1% stating that they exercise regularly (at least three times weekly).



Things appear to worsen year by year, if one compares with the results of previous studies. In particular, the epidemiological survey of the Ministry of Health (*Annual Report 2001*) had shown that 32.2% of the population had a totally sedentary lifestyle *(Golna et al., 2004).* Two years later the Ministry's Health Survey demonstrated that 63.8% never exercise, and the majority of the rest (27.3%) do some kind of light exercise, such as walking and bicycling at least four hours weekly *(Cyprus Statistical Service 2003).*

The same trend is true for smoking. My Survey demonstrated that 29.6% of Cypriots are active smokers, while 46.9% state passive smokers; (*both percentages based on those who replied*) (**Chart 11: Smoking Habits** and **Chart 12: Passive Smoking**):





Previous studies showed that 23.9% of the population smoked daily, *(Cyprus Statistical Service 2003; Golna et al., 2004),* this percentage estimated to be 68% higher than the EU average, *(Antoniadou 2005)* and a study carried out among freshmen college students showed that 39% smoke frequently with only 39% reporting no smoking, *(Karekla et al., 2007)*

5.1.2. Finding Two

The evidence in literature that the academic, political, and medical communities acknowledge the imperative of a paradigm[1] shift in the provision of healthcare towards more patient-centred models on the basis of multidisciplinary approaches, was also confirmed by my research in Cyprus. In fact, a paradigm shift appears to be already materialising at different levels but most importantly within the public, particularly those at the higher income and educational strata of the population, confirming also evidence in literature.

For evidence in literature on Finding TWO please refer to:

THIS REPORT,
Chapter 2.5. HEALTHCARE IN THE TWENTY FIRST CENTURY

The EVIDENCE OF ACHIEVEMENT
Part V: PUSHING FORWARD THE BOUNDARIES OF HEALTHCARE
Chapter I: *A New Philosophy in the Provision of Healthcare*

Finding Two was related to the identification of a strong trend towards a new philosophy in the provision of healthcare as demonstrated by a volume of literature (*evidence in Literature review*). The Interviews with Cypriot key actors revealed the existence of awareness for the imperative of a more pluralistic system of healthcare in which new therapeutic modalities are included to complement the current biomedical system. It was generally accepted that citizens should be free to exert their right to choose the treatment they prefer for their chronic health problems and to have access to more natural methods of treatment if they wish, as long as they are evidence-based and practiced by approved-by-the-government practitioners. The need to

[1] 'A paradigm is a model that is used to explain events. As our understanding of the environment and the human body evolves, new paradigms)explanations) are developed')*Murray & Pizzorno 1998*)

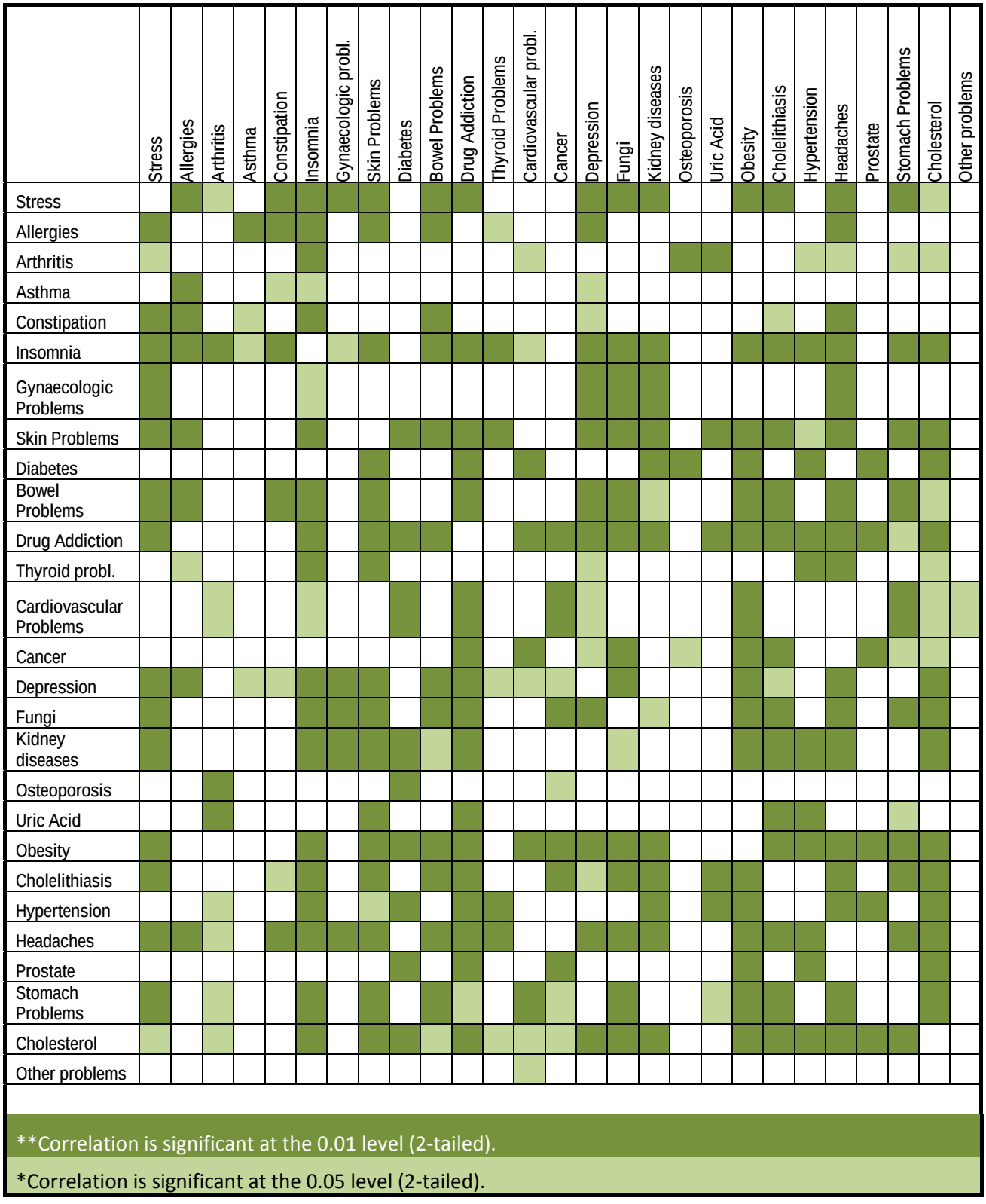
emphasise prevention rather than treatment, in line with the new worldwide trends, was adopted by all of them. Awareness was also expressed for the role of diet and lifestyle in disease, as well as for, other than those traditionally considered, determinants of disease, such as the hazards emerging from modern methods of farming and manufacturing of food. The need to encourage patients to become active participants to their treatments was also stressed. In particular, Official Two of the Ministry of Health, stressing the Ministry's commitment to place the benefit of the public at the top of their list of priorities, acknowledged the need for wholistic, integrated and more patient-centred approaches to healthcare emphasising prevention rather than treatment. He also expressed his support to the inclusion of new modalities if they are evidence-based or proven effective throughout centuries. In contrast, Official One of the same Ministry appeared to believe that there are currently no flaws and shortcomings in the provision of healthcare in Cyprus and therefore no major changes are required. Also the Representative of the Doctors' Association acknowledged the existence of a few minor problems in the Healthcare system, such as low emphasis on nutrition, and the existence of unauthorised therapists due to non-regulation. The Officials of the HIO admitted that they are aware of the worldwide trends for a new philosophy in healthcare, and seriously consider to investigate in the near future the possibility of including non-conventional medicines in the new system, provided they are practiced by practitioners adequately educated and trained to conform to European Union accepted scientific standards.

The findings of the Survey further verified the worldwide awareness for a patient-centred health system -underlying also the importance of the General Practitioner- by demonstrating the existence of strong positive correlations between different, and often seemingly unrelated diseases of both physical and psychological nature (the causal relationship often working both ways). This finding was also confirmed by other researchers, who highlighted the

fact that patients with multiple co-existing chronic health problems are the rule rather than the exception, as demonstrated in literature (***Chapter 2.4. Contemporary Healthcare-A critical appraisal***). A few examples are cited below (**Table 4: Correlations between health problems)**: ***Bowel problems, for example,*** correlate positively (*at the 1% significance level 2-tailed*) with stress, allergies, constipation, insomnia, skin problems, drug addiction, depression, fungus infections, obesity, cholelithiasis, headaches, and stomach problems and (*at the 0.5% significance level 2-tailed*) with kidney disease and cholesterol. **Stress** correlates positively (*at the 1% significance level 2-tailed*) with allergies, constipation, insomnia, gynaecological problems, skin problems, bowel problems, drug addiction, depression, fungus infections, kidney disease, obesity, cholelithiasis, headaches, and stomach problems; and (*at the 0.5% significance level 2-tailed*) with arthritis and cholesterol. **Cardiovascular problems**, correlate positively (*at the 1% significance level 2-tailed*) with drug addiction, diabetes, cancer, obesity, stomach problems; and (*at the 0.5% significance level 2-tailed*) with arthritis, insomnia, depression, and cholesterol. **Diabetes** correlates positively (*at the 1% significance level 2-tailed*) with skin problems, drug addiction, cardiovascular problems, kidney disease, osteoporosis, obesity, hypertension, prostate and cholesterol. **Hypertension** was found to correlate positively (*at the 1% significance level 2-tailed*) with insomnia, diabetes, drug addiction, thyroid problems, kidney disease, uric acid disorder, obesity, headaches, prostate, cholesterol and (*at the 0.5% significance level 2-tailed*) with arthritis, and skin problems.

(*In the below* **Table 4:Correlations between health problems** *colours replaced values due to limited space in the document. For more detailed table with values please see Appendix 3*).

TABLE 4: CORRELATIONS BETWEEN HEALTH PROBLEMS



The analysis of Case Studies from my Clinical Practice further confirmed the findings in literature that patients with multiple chronic health problems 'are the rule rather than the exception', (***Chapter 2.4. Contemporary Healthcare- A critical appraisal***) and the Survey finding that several chronic health problems coexist in most patients (**Table 4: Correlations between health problems).** As demonstrated in **Appendix: 3: Medical prescriptions for specific health problems,** most of the patients appear to suffer with a multitude of health problems often of both physical and psychological nature. A closer look at each patient demonstrates the co-existence of several, often seemingly unrelated chronic health problems. For example: In patient P2 hypercholesterolaemia coexists with fungus infections, alopecia, cholelithiasis, arthritis, allergies and gastrointestinal problems. Patient P4 suffers at the same time with asthma, skin eczema, xeropthalmia, gastritis and irritable bowel syndrome and patient P21 from psoriasis, tonsillitis, tinnitus, irritable bowel syndrome, stress and allergies. Similarly patient P22 suffers at the same time with diabetes, skin eczema, tonsillitis, fatty liver and irritable bowel syndrome and patient P24 from osteopenia, fibroids, periodontal disease, arthritis while she was operated for breast cancer. The mind-body interaction is particularly evident in patients P7, P15, P16, P27, P28, P29, P33, P43, P46, P48, P49, who suffer from either depression, panic attacks, or insomnia together with one or more of the following: Gastrointestinal problems, Asthma, Osteoporosis, Xeropthalmia, Skin problems, Arthritis, Thyroid disorders, Dental problems, Obesity, Calcifications, Osteoarthritis, Urine infections, Allergies, Headaches, Hypercholesterolemia, Fatty liver, Hypertension, Fungus infections, Fibrocystic breast disease, (**Appendix: 3: Medical prescriptions for specific health problems)**

A significant parameter of Finding Two was the evidence that the paradigm shift in healthcare appears to be already materialising at different levels of the society and different degrees (*as demonstrated by evidence in literature*). During the Interviews, almost all Cypriot key actors emphasised on the role of

the government in safeguarding, with adequate laws and regulations, the right of citizens to make informed choices and their protection from unauthorised so-called 'therapists' and demonstrated awareness for the need for inclusion into the National Health System of some non-conventional therapeutic modalities, bringing up examples of other European countries, such as Germany, Austria, and Greece. In particular, Official Two of the Ministry of Health stated that in view of the recent developments in the health sectors of other European countries, and under the pressure exerted by different interest groups, the issue of recognition and incorporation of non-conventional therapies into the healthcare system of Cyprus is being recurrently brought to the table for discussion for quite some time now. However, it was made clear that any new policies should be formulated and implemented at the European Union level first. At the moment, he said, the Ministry has adopted and is promoting the new philosophy of healthcare for emphasis on prevention rather than treatment, as suggested by the World Health Organisation and the European Union. Both Official One of the Ministry of Health and the Representative of the Doctors Association agreed that under the pressure of the public demand, and in view of developments in the European Union, they might discuss the inclusion of a number of Non-Conventional modalities in the National Health System, as long as they are scientifically proven. In fact, the Representative of the Doctors' Association revealed that a number of non-conventional modalities are already being examined for inclusion in the national health system, but difficulties are anticipated, mainly because not all their members are convinced about the need for these. The Officials of the Health Insurance Organisation (HIO) stated that in view of European new guidelines for emphasis on prevention, they currently concentrate only on conventional forms of healthcare, such as offering incentives to medical doctors for further clinical examinations related to the prevention of disease at its onset. They also revealed the existence of a number of bottlenecks to the inclusion of NCMs related to the current establishment, in addition to admitting lack of information of what happens in other countries. The Representative of the Greens Party stated

that his party has taken recurrent action with proposals to the government and lobbying towards this aim, and he had a number of meetings with the Ministry of Health for this, verifying the abovementioned statements of Official Two of the Ministry.

The Survey demonstrated clearly that the Cypriot public, in line with evidence in literature and the worldwide trends, is already frequently resorting to non-conventional therapies, often in conjunction with their medical treatments, in an effort to find solutions to their multiple chronic health problems. In **Table 5: Age, Income, Education, and Treatment Correlations** below, pharmaceutical treatment was shown to be significantly positively correlated with: special dietary treatment nutritional supplement treatment, homoeopathy, and other NCMs.

TABLE 5: AGE, INCOME, EDUCATION AND TREATMENT CORRELATIONS

	Age	Education	Monthly family income	What kind of treatment do you usually follow: (drugs)	What kind of treatment do you usually follow: (special diet)	What kind of treatment do you usually follow: (food supplements)	What kind of treatment do you usually follow: (homeopathy
Education	- 0.493**						
Monthly family income	- 0.237**	0.262**					
What kind of treatment do you usually follow: (drugs)	0.183**	- 0.153**	0.076				
What kind of treatment do you usually follow: (special diet)	0.123**	0.019	0.152**	0.291**			
What kind of treatment do you usually follow: (food supplements)	- 0.020	0.112*	0.152**	0.144**	0.456**		
What kind of treatment do you usually follow: (homeopathy)	0.002	0.036	- 0.004	0.106*	0.157**	0.168**	
What kind of treatment do you usually follow: (other)	0.074	0.002	0.012	0.171**	0.265**	0.181**	0.304**

**Positive Correlation significant at the 0.01 level (2-tailed).

* Positive Correlation significant at the 0.05 level (2-tailed).

**Negative Correlation significant at the 0.01 level (2-tailed)

In the analysis of Case Studies from my Clinical Practice, in **Table 6: Use of Non-Conventional therapies before Nutritional Treatment:** 24% of the randomly selected cases stated that they had a non-conventional treatment in the past, and 68% used in the past, or use now, nutritional supplements (vitamins, minerals, herbs, etc) for a specific health problem; and 54% used some kind of nutritional supplements without specialist advice, while 14% stated that their doctor prescribed nutritional supplements (mainly iron, calcium and multivitamins

TABLE 6: USE OF NON CONVENTIONAL THERAPIES BEFORE NUTRITIONAL TREATMENT
(Percentage of 50 randomly selected cases from clinical practice)

TYPE OF NON-CONVENTIONAL THERAPY	percentage
Used supplements for a specific health problem	68%
Used supplements without advice	54%
Used supplements (mainly iron, calcium and multivitamins) with doctor's advice	14%
Had other Non Conventional medicine treatments	24%

The second parameter of Finding Two was the identification of the level of socioeconomic status as a strong predictor of the use of NCMs. Researchers refer to a higher prevalence of NCMs use, often in combination with their medical treatments, among college and university graduates, as well as among people with higher incomes, (*Chang et al., 2007; Kennedy et al., 2007; Lee et al., 2002; Eisenberg et al., 1998; Avogo et al., 2008*). This socioeconomic determinant of NCMs use was also confirmed by the Survey. Cypriots with high education and high income appear more likely to use complementary and alternative, rather than conventional, therapies for treatment. A significant negative correlation (-0.153**), between level of education and use of pharmaceutical means was found, as well as a significant positive correlation (+0.112*) between educational level and use of nutritional supplements for treatment of a specific health problem (**Table 5: Age, Income, Education, and**

Treatment Correlations). In addition a significant positive correlation was evident between the level of income of one's family and the extent of use of special dietary treatment (+0.152**), and/or nutritional supplements (+0.152**) for treatment of a health problem (**Table 5: Age, Income, Education, and Treatment Correlations).** Drug addiction is also very high at low educational levels, gradually decreasing and approaching zero at the college and university levels of education, as demonstrated (**Table 7: Education and Health Problems).**

TABLE 7: EDUCATION AND HEALTH PROBLEMS

HEALTH PROBLEM	ELEMENTARY	HIGH SCHOOL	COLLEGE/ UNIVERSITY
STRESS	17.0%	17.3%	17.2%
HEADACHES	9.6%	9.5%	13.9%
HYPERTENSION	23.4%	8.6%	2.6%
ALLERGIES	7.4%	9.4%	8.6%
CHOLESTEROL	12.8%	7.1%	5.2%
ARTHRITIS	17.0%	4.7%	5.2%
INSOMNIA	7.4%	5.8%	6.0%
BOWEL PROBLEMS	8.5%	4.7%	6.9%
OBESITY	10.7%	4.7%	3.5%
CARDIOVASCULAR	18.1%	2.7%	1.7%
OTHER PROBLEMS	8.6%	3.6%	6.1%
GYNAECOLOGICAL	7.5%	4.3%	5.2%
STOMACH PROBLEMS	6.4%	3.9%	4.3%
DIABETES	13.8%	2.4%	0.9%
CONSTIPATION	2.1%	4.3%	6.0%
DEPRESSION	3.2%	5.1%	2.6%
OSTEOPOROSIS	12.9%	1.6%	1.7%
SKIN PROBLEMS	1.0%	4.3%	3.4%
ASTHMA	3.2%	2.0%	4.3%
THYROID PROBLEMS	3.5%	2.2%	2.8%
DRUG ADDICTION	7.6%	1.6%	0.0%
CHOLELITHIASIS	4.3%	2.0%	1.8%
FUNGI	3.2%	1.6%	3.5%
CANCER	3.0%	2.2%	2.4%
KIDNEY DISEASES	2.1%	1.2%	1.7%
URIC ACID	2.0%	0.4%	0.0%
PROSTATE	0.0%	0.4%	0.0%

The analysis of Case Studies from Clinical Practice also supported the socioeconomic element of NCMs use. As shown in **Table 8: Educational level of patients from Clinical Practice compared to Survey population sample**, the majority of those who visited the clinic for a nutritional treatment belong to the higher educational groups. Analytically, 56.7% of the 350 patients who visited the clinic between the years 2005 and 2008 and had at least one consultation after receiving their treatment, were college or university graduates, 40.1% have secondary education, and only a 3.2% were of primary education. Taking into consideration the distribution of the whole adult population of Cyprus into different educational levels as established by the Survey, -university/college 24.9%, high school 54.8%, and elementary 20.2%-, it is obvious that the proportion of persons with higher education who visited the clinic for a nutritional treatment was in fact more than double compared to their proportion in the whole population,

TABLE 8: EDUCATIONAL LEVEL OF PATIENTS FROM CLINICAL PRACTICE COMPARED TO SURVEY POPULATION SAMPLE

EDUCATIONAL LEVEL	PATIENTS WHO VISITED THE CLINIC FOR NUTRITIONAL THERAPY*	PERCENTAGE IN TOTAL POPULATION**
Primary school	**3.2%**	20.2%
Secondary education	**40.1%**	54.8%
College/university	**56.7%**	24.9%
TOTAL	**100.0%**	**100.0%**

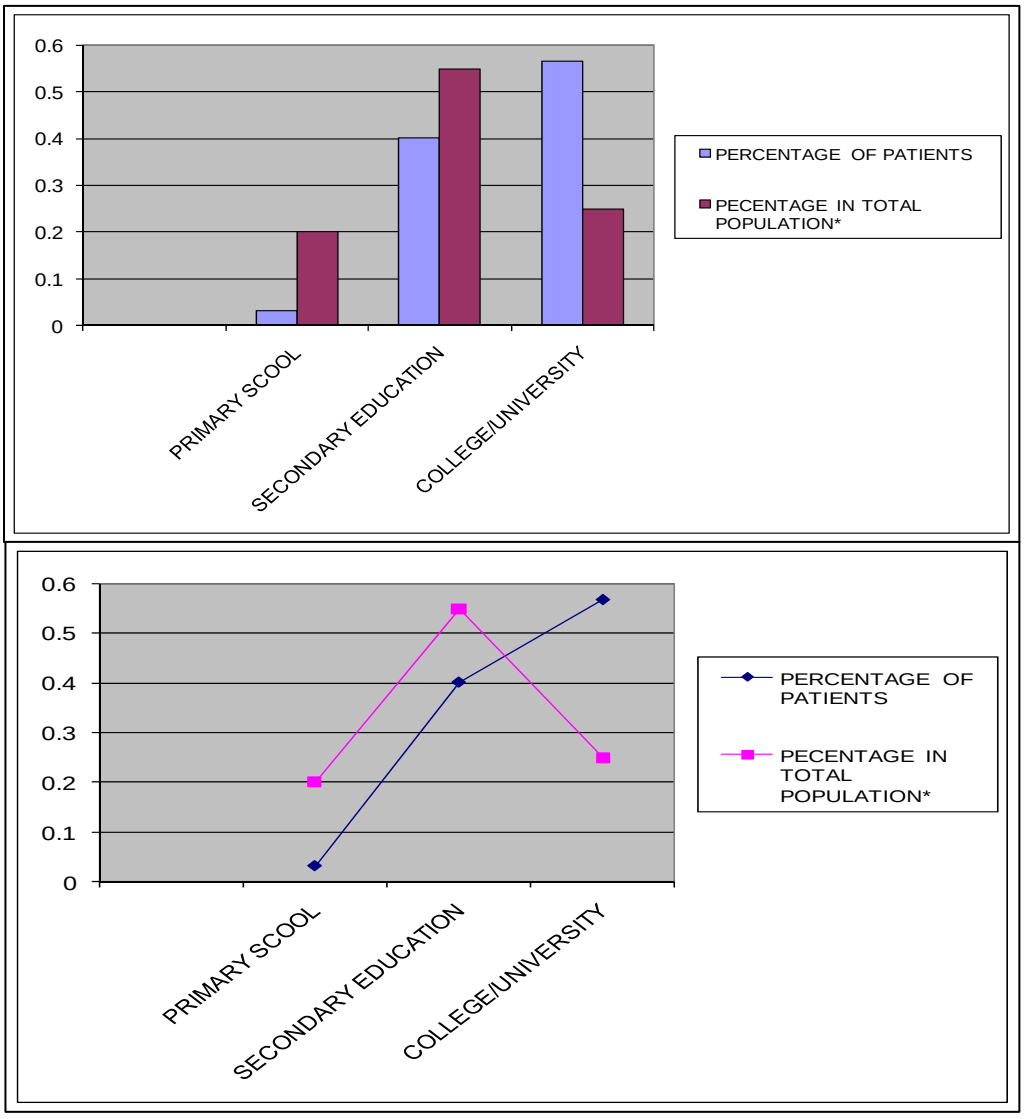
***Based on 350 cases who came back for at least one consultation after receiving their prescription**

**** Based on the survey**

It is worth noting that in most cases, the appointment for a consultation at the clinic for those that belong to the lower educational levels was arranged by a close relative (offspring, brother, etc) with higher education. This

strengthens further the case for the education-alternative medicine positive correlation.(A graphical representation of the table above as shown in **Chart 13: Educational level of patients from Clinical Practice compared to Survey population sample**)

CHART 13: EDUCATIONAL LEVEL OF PATIENTS FROM CLINICAL PRACTICE COMPARED TO THE SURVEY POPULATION SAMPLE



5.1.3. Finding Three

Criticisms in literature of the efficiency and effectiveness of contemporary health systems of the Western world (including Cyprus) to contain the rising incidence of chronic disease, and their potential to adapt to the new worldwide trends for more patient-centre models of healthcare based on multidisciplinary approaches were also confirmed by the research in Cyprus

For evidence in literature on Finding THREE please refer to:

THIS REPORT,
Chapter 2.1. INTRODUCTION
Chapter 2.4: CONTEMPORARY HEALTHCARE- A critical appraisal

The EVIDENCE OF ACHIEVEMENT
Part III: CONTEMPORARY HEALTHCARE-A CRITIQUE
Chapter I: *Health systems out of date*

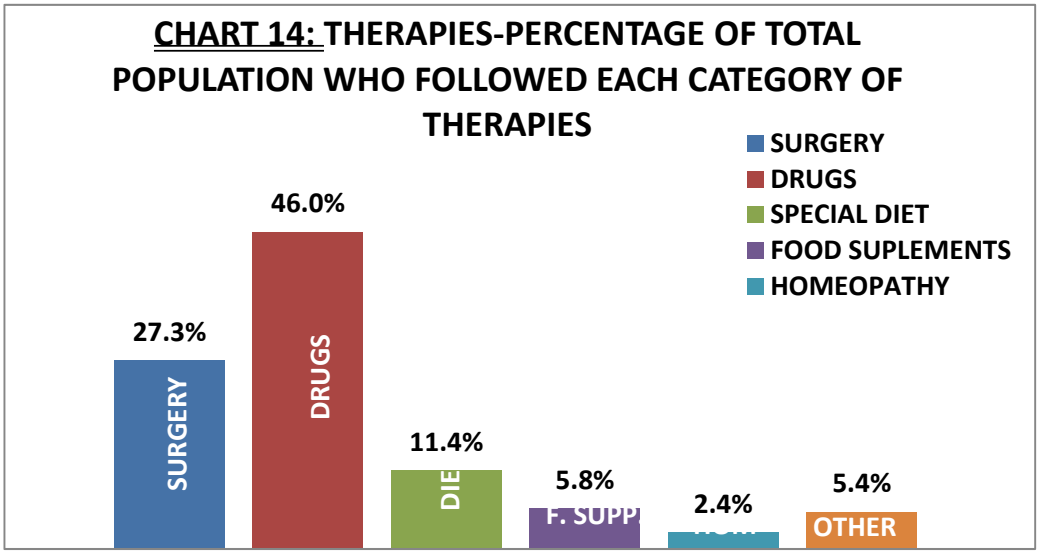
The criticisms identified in literature were further confirmed and updated during the interviews with the key actors in Cyprus. The President of the Board of HIO replying to questions by the media in November 2010, claimed that 'the present public health sector has reached its limits' and that citizens are disappointed by the declining quality of services' in spite of the fact that the expenses of the public health sector increase at a rate of 11% per year. He characteristically referred to a public demand for modernisation of the National Health System towards more patient-centred approaches, (*Cyprus Health Insurance Organisation 2010*). Similar views were expressed by the Officials of HIO during our first interview in February 2008 for the purpose of this project. In particular strong support was expressed to a modernised health system, which provides all the prerequisites for citizens to be adequately informed and free to choose their treatment, even if the unions of any profession have a different opinion. The state, they claimed, has the obligation to offer this choice to the patient, "not to direct the patient" . In addition it was stressed that the ultimate aim of the current Board of the Health Insurance Organisation is to adapt and modernise the new Cyprus

Health System, on the basis of other European countries' health systems, in order to be able to offer the European citizen equal level of services wherever they are. In line with these comments, were the President's of HIO statements to the media in November 2010, according to which Cyprus needs to follow the example of other health systems in Europe which develop, modernise, update, and adapt to the changing circumstances of the society in order to offer the level of health citizens want to have, (*Cyprus Health Insurance Organisation 2010*). Contrary to these statements, the Ministry of Health, in its 2007 Annual Report, claims that the state has managed to provide a 'high level of health' to its citizens, 'favourably compared with the other developed countries', and this statement is supported with two tables: the first presenting the figure 6.3% of its GDP spending on health and the second presenting the Life Expectancy (LE) of Cypriots as having increased from 80.4 and 75.3 years for females and males respectively to 81.7 and 77.00 years within a period of 5 years. No reference is made to the Healthy Life Expectancy Indicator, (*MOH 2008, p.14*).

The majority of the politicians also criticised the current establishment of the provision of healthcare in Cyprus during the Interviews. In spite of the expressed optimism of Official One of the Ministry of Health that the health system of Cyprus is efficient and effective, working perfectly on the basis of a good cooperation between healthcare providers without major weaknesses and limitations, Official Two of the Ministry acknowledged a number of limitations, (related to the subject of the interview) such as the lack of adequate emphasis on Nutrition, as well as lack of professionals with adequate scientific knowledge and expertise for therapeutic nutritional interventions. Criticisms were also expressed against the current establishment for low professionalism; for not adequately providing for the role of Nutrition as a means for prevention and treatment, and for not safeguarding the right of citizens to make informed choices for the treatment they wish. Furthermore, the officials of the Health Insurance Organisation expressed their opposition to practices such as guiding the patient on the

basis of personal interests and highlighted the financial constraints preventing the organisation from providing more services to the patients.

An important finding of the research related to the criticisms is the identification of a gap between the policies of the state and the desires and needs of the citizens further supporting the argument for the outdated health system. The Survey demonstrated that Pharmaceutical and Surgical treatments appear as the first resort to therapy amongst Cypriots. Replying to the question *'If you did more than one treatment for a specific health problem, which order of treatment did you follow?'* (***Appendix 1, Question 18***), the replies demonstrated that the order of treatment amongst the population appears as: pharmaceutical (46.2%), surgery (27.3%), special diet (11.4%), food supplements (5.8%), homeopathy (2.4%) and other (5.4%) (**Chart 14:Therapies-Percentage of total population who followed each category of therapies)**



In addition, from the analysis of Case Studies from my Clinical practice (**Table 9: Nutritional and Drug Prescriptions by Doctors)**, it appears that the majority of patients (88%) were prescribed pharmaceutical treatments with only 14% of them being offered other than medical prescriptions (mostly

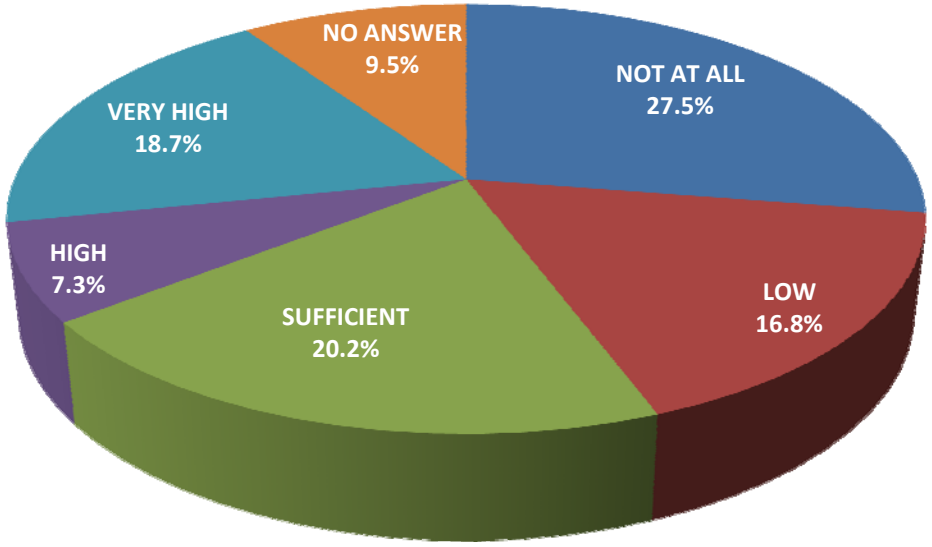
consisting of calcium, iron, and multivitamin supplements). Dietary treatment was prescribed to only 2% of them, and was limited to the avoidance of specific foods and always along with their pharmaceutical treatment. Worth noting is that in all cases of other than medical treatments, these were prescribed alongside with drug prescriptions

TABLE 9: NUTRITIONAL AND DRUG PRESCRIPTIONS BY DOCTORS
(50 randomly selected cases from Clinical Practice)

TYPE OF ADVICE	Number of patients	Percentage of total number of patients
No nutritional advice	**43**	**86%**
◗ **With drug prescription**	37	74%
◗ **Without drug prescription**	6	12%
Calcium supplements	**2**	**4%**
◗ **With drug prescription**	2	4%
◗ **Without drug prescription**	0	0%
Iron supplements	**2**	**4%**
◗ **With drug prescription**	2	4%
◗ **Without drug prescription**	0	0%
Calcium and Iron supplements	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%
Multivitamins	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%
Avoidance of foods	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%

The gap between state policies and peoples' desires appears if above finding is contrasted with a number of other findings of the Survey. The first is demonstrated below in **Chart 15: Willingness to follow a strict diet**,: where a significant percentage of the population appears willing to follow a strict diet, rather than drug therapy, in order to get rid of their chronic health problems. The question addressed to them was: '*To what extent are you willing, instead of taking drugs, to follow a nutritional therapy which would demand a strict diet excluding your favourite foods, in exchange for your cure?*' (***Appendix 1, Question 24***) In replying, 26% of the population stated as having 'very high' (18.7%) or 'high' (7.3%) willingness to follow the strict diet for treatment and 20.2% of them expressed 'sufficient' willingness.

CHART 15: WILLINGNESS TO FOLLOW A STRICT DIET



Apparently 46% of the population would accept to follow a strict diet for therapy, ***if that was offered to them, or if they could afford it (high income), or if they were informed about it (educated)***. This last conclusion was evident from cross-tabulation of the results of the survey, (**Table 5 : Age, Income, Education and Treatment correlations)** where education and income were shown to be significantly positively correlated with dietary and

nutritional supplement treatments, and education to be significantly negatively correlated with pharmaceutical treatments. In addition, dissatisfaction with treatments currently offered (at the order demonstrated above, in **Chart 14:Therapies-Percentage of total population who followed each category of therapies),** was evident from the reply to the question: '*Do you believe that you were completely cured from your health problem for which you have been treated*?' (***Appendix 1, Question 21***). In this question 57.1% of persons being treated for a health problem stated as not cured completely, (**Chart 2: Percentage of persons cured completely after treatment).** Also from the replies to the question: 'Do you continue to take medicines for the problem for which you were treated?' (***Appendix 1, Question 20***), 18.79% of those treated stated that they stopped their medication without being cured, (**Chart 3: Medication and persons who claim they were not cured).**

A number of factors could be considered as opposing the expressed willingness of Cypriots to follow dietary means: a) high cost of some non-conventional treatments, such as nutritional supplements, which people find them very expensive in the Cypriot market. This particularly affects old age, as age was found (**Table 5: Age, Income, Education and Treatment Correlations**) to be significantly negatively correlated with income, resulting to a positive correlation between age and the use of drugs, b) non-conventional Medicines are not currently provided by the state: for example Dietary means of treatment according to the Officials of the HIO statements during the interviews with the author, are not subsidised as they are not considered to be part of common medical practice in Cyprus and c) the total family income for 68% of the population is below 3,000 Euros per month as in the Survey (**Chart 16: Monthly Family Income)**

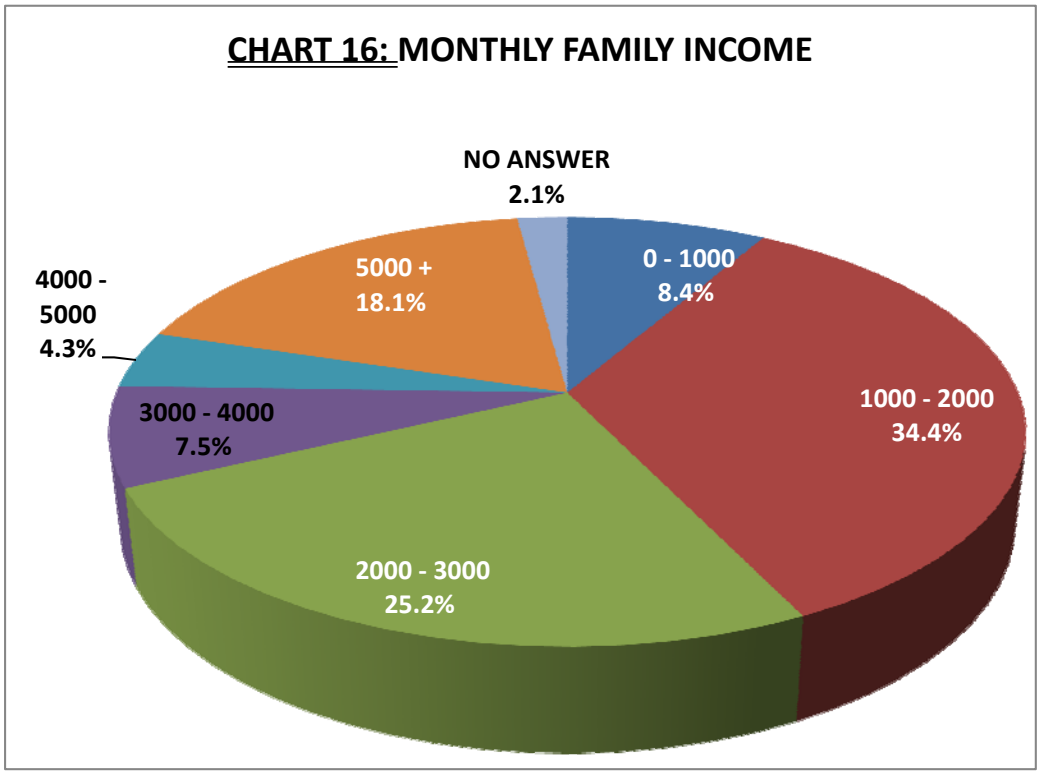


CHART 16: MONTHLY FAMILY INCOME
NO ANSWER
2.1%
0 - 1000
8.4%
1000 - 2000
34.4%
2000 - 3000
25.2%
3000 - 4000
7.5%
4000 -
5000
4.3%
5000 +
18.1%

5.2. OBJECTIVE TWO-CONTEMPORARY HEALTHCARE

To critically investigate evidence on the role of contemporary healthcare and the methods currently used, in the rising incidence of chronic disease and to evaluate the extent to which the desires/expectations/needs of people are met. To evaluate public and political perceptions in Cyprus on these issues

5.2.1. Finding Four

Criticisms related to current approaches to healthcare, are evident in literature, particularly in the area of prevention and treatment of chronic disease. The majority of critiques, are raised from within the medical community itself, mainly as a result of self-evaluation and reflective practice, and focus on the exclusive reliance of modern healthcare on a disease- rather than patient-centred medicine, contrary to people's expectations, and needs. Public and political perceptions, as well as evidence from my Clinical practice in Cyprus appear to confirm many of these criticisms.

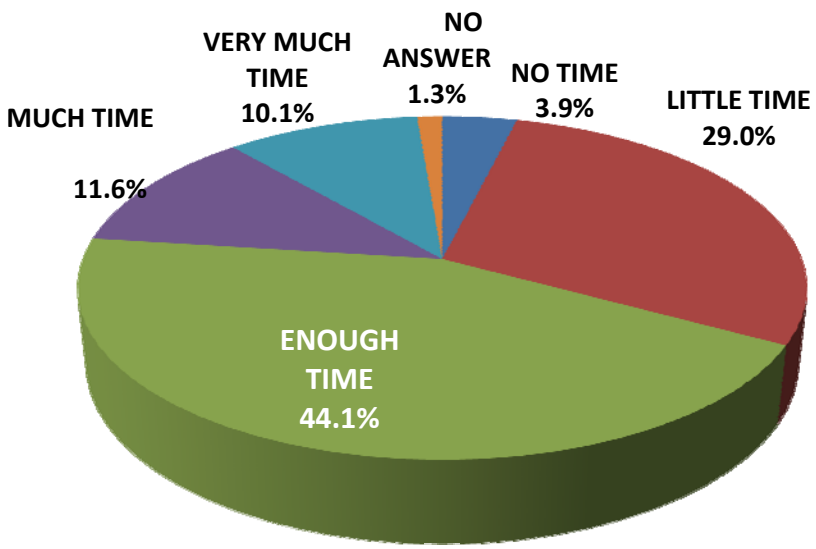
For evidence in literature on Finding FOUR please refer to:

THIS REPORT,
Chapter 2.1: INTRODUCTION
Chapter 2.4. CONTEMPORARY HEALTHCARE-A critical appraisal
The EVIDENCE OF ACHIEVEMENT
Part III: CONTEMPORARY HEALTHCARE-A CRITIQUE

The overemphasis on a disease- rather than patient-centred model of healthcare was a major criticism in literature. Most of these criticisms were confirmed by the Survey in Cyprus which demonstrated a high degree of dissatisfaction among Cypriots with the time and attention allocated to them to see their doctor (**Chart 17: Time allowed by doctor to discuss a specific**

health problem), When replying to the question: '*To what extent do you believe the time allocated to see your General Practitioner when you are sick, is adequate to discuss exhaustively you specific health problem?*' (***Appendix 1, Question 26***), 32.9% of Cypriots stated they were dissatisfied, with only 21.7% stating 'very much' or 'much' satisfied. The percentage of dissatisfaction appears to rise further in the responses to the question: '*To what extent do you believe you are given the opportunity to discuss with your doctor the general state of your health, apart from the specific problem for which you have visited him/her?*' (***Appendix 1, Question 27***), In this case (**Chart 18: Time allocated by doctor to discuss their general health condition),** 43.4% of Cypriots stated as 'not given any', or 'given little' time, whilst only 20.4% of the Cypriot population stated as given 'much' or 'very much' time to discuss their general state of health with their doctor.

CHART 17: TIME ALLOWED BY DOCTOR TO DISCUSS A HEALTH PROBLEM



Evidence derived from the analysis of Case Studies from my Clinical Practice demonstrated clearly that oversimplified models of treatment, which focus on a disease- rather than the patient-centred approaches are frequently

applied and consequently most of the time what is attempted to be treated is a specific 'disease' and not the whole patient. As a general rule, and irrespectively of who is the patient, a specific chronic health problem, such as constipation, pain, gastritis, arthritis etc, is 'treated' usually with the same group of drugs; all women with osteoporosis will get similar groups of medicines; and all patients with a headache will be prescribed a painkiller, thereby substantiating the critiques that most prescriptions, target particular 'labels'. Worth noting from the analysis is the chronic use of most medications (often without prescription), which further confirms the findings above that chronic disease, most of the times, is not completely cured with these methods and only the symptoms are addressed in the majority of cases, which recur when medications are stopped. Apparently, deeper causes, related to the patients particular circumstances hide behind the symptoms which were not exhaustively investigated.

A few examples are cited and discussed below, on the basis of **Appendix 3: Medical prescriptions for specific health problems**

DISEASE NAME

Constipation

Patients: P1, P3, P4, P7, P8, P15, P16, P19, P20, P21, P23, P24, P27, P28, P38, P39, P40, P42, P43, P45, P47, P49, P50 =23 patients

21 out of 23 patients who stated as suffering with constipation were either prescribed or used without doctor's advice, Laxatives. As demonstrated in the table these have been used by the patients chronically or recurrently. Laxatives, as defined by pharmacology, act in the large intestine to cause looseness of the stools, stimulate peristalsis of the bowel, increase bowel frequency and ultimately promote cleansing of the colon. The action of laxatives is palliative and their prolonged use is harmful, (*Pizzorno & Murray 2007-2011: Drug Database; Henry 2002; Dawson et al., 2002; Hopkins 1999*). The fact that the vast majority of above patients were prescribed only laxatives for constipation

confirms the failure to take into account a volume of evidence demonstrating that constipation is not a disease *per se* but only a superficial symptom of a number of underlying causes, such as imbalance of bowel bacterial population and/or enzyme deficiency, (*Plaskettt 2004* (*i-xv*)*; Jensen 1978; Balch & Balch 2000; Pizzorno & Murray 2006; Goldberg et al., 2002; Werbach [1996, 1997, 1999; Garrow et al., 2000; Crowell 2004; Werbach & Moss 1999*), neuropsychosocial disorders such as stress and serotonin deficiency, (*Camilieri 2010; Manini et al., 2009; Sult 2005; Spiller 2007; Lacy et al., 2009; Sanger 2009; Crowel 2004*), and a number of other factors strongly related to the particular diet and lifestyle of each individual, (*Plaskettt 2004* (*i-xv*)*; Jensen 1978; Balch & Balch 2000; Pizzorno & Murray 2006; Goldberg et al., 2002; Sult 2005; Werbach [1996, 1997, 1999; Ballentine 1978; Zimmerman 2001ii; Murray 1998; Crowell 2004; Werbach & Moss 1999*) (*Appendix 3*)

Gastritis/GERD[1]

Patients: P2, P3, P4, P5, P6, P7, P15, P17, P18, P19, P20, P23, P25, P27, P30, P31, P32, P33, P37, P42, P43, P45, P47, P50

All 24 patients who were diagnosed with Gastritis or Gastroesophageal Reflux Disease were, either prescribed or used without doctor's advice, proton pump inhibitors and/or antacids which they have been using chronically or recurrently. Proton pump inhibitors, or otherwise called H_2 blockers, work to protect the stomach lining from the action of stomach acid, allowing ulcers to heal a process might take about four to eight weeks, and they are indicated for short treatment, (*Dawson et al., 2002, p.171; Henry 2002, p.109*). Antacids are alkaline chemical compounds used to neutralise stomach acid, prevent inflammation and relieve pain. Regular use of antacids also encourages the healing of ulcers, (*Henry 2002, p.109*). Apparently their action is palliative since the vast majority of these patients continue to use proton pump inhibitors and antacids for long time, with shorter of longer intervals, often without prescription. This demonstrates that the deeper cause or causes was not addressed, since the problem reappears. Studies confirm that gastritis and Gastroesophageal reflux disease are disorders of gastrointestinal function emerging from unbalanced bowel flora, enzyme deficiency, vitamin/mineral

imbalances and wrong dietary habits and lifestyle, (*Plaskettt 2004* (*i-xv*)*; Jensen 1978; Sult 2005; Balch & Balch 2000; Pizzorno & Murray 2006; Liska et al., 2004; Goldberg et al., 2002; Werbach [1996, 1997, 1999]; Higdon 2003; Crowell 2004; Yarnell 2000; Werbach & Moss 1999*) (***Appendix 3***)

Arthritis / Osteoarthritis

37 out of 50 patients complained for different pains, out of which 35 for musculoskeletal pains. 16 patients were diagnosed with arthritis, 8 with osteoarthritis, one with Neck Syndrome, one with Chronic Fatigue Syndrome, and 2 with Degenerative Bone Disease. All patients who complained for pains were, either prescribed or used without doctor's advice, Non Steroidal Anti-inflammatory Drugs (NSAIDs) and other painkillers whereas 6 patients used NSAIDs without being diagnosed with a specific disease. All patients, except one, who were diagnosed with arthritis or osteoarthritis, were, either prescribed or used without doctor's advice, NSAIDs (and/or other painkillers) as the only treatment of their specific health problem, which used chronically or recurrently. NSAIDs, including aspirin, act by interrupting the synthesis of prostaglandins from arachidonic acid, by inhibiting the enzyme cyclo-oxygenase (prostaglandin synthetase). They are not supposed to alter the progress of disease, but reduce inflammation and thus relieve pain and swelling of the joints, (*Hopkins 1999; Henry 2002,*). NSAIDs are shown to have serious effects, especially with prolonged use, including gastric bleeding, ulceration, perforation, prolonged bleeding effect, and impairment of renal and hepatic function, (*Hopkins 1999; Dawson et al., 2002; Pizzorno & Murray 2007-2011: Drug Database;*). According to evidence 4-16% of patients on NSAIDs report gastrointestinal complaints, (*Pizzorno & Murray 2007-2011: Drug Database*), 70,000 people are hospitalised every year for digestive disorders from NSAIDs, and deaths from these drugs are between 7,600-20,000 annually, (*Graedon & Graedon 1995, pp.26-27*). In spite of above information NSAIDs are used by people in pain without control, and often without prescription. The fact that all above patients have stated that they use NSAIDs chronically confirms that they are not completely cured, demonstrating their palliative, rather than curative, action for arthritis and

pain. Apparently there exists a deeper cause, or causes, hidden behind the pain, which are not adequately addressed by the doctor. A volume of studies demonstrate metabolic disturbances, mineral imbalances and other deficiencies related to diet and lifestyle habits in arthritis with or without the contribution of a genetic predisposition, (*Plaskettt 2004* (*i-xv*)*; Jensen 1978; Balch & Balch 2000; Pizzorno & Murray 2006; Goldberg et al., 2002; Werbach [1996, 1997, 1999]; Crowell 2004; Werbach & Moss 1999*) (*Appendix 3*). Worth noting is evidence in literature demonstrating the high use of analgesics (painkillers), typical medicines for symptom relief, which represent the 46.6% of prescribed medicines in Cyprus, (*Cyprus Statistical Service 2003*).

Allergies

Patients P5, P6, P7, P10, P16, P18, P19, P21, P23, P25, P27, P30, P32, P33, P38, P43, P47, P50, total of 18 patients were diagnosed with the disease name 'Allergies'. Almost all used, with or without doctor's advice, 'antihistamines'. Antihistamines are histamine antagonists, that is they act by blocking the release of histamine, a chemical released in the body in an allergic reaction, thereby inhibiting the allergic response. Their action is palliative and not curative therefore they should be used throughout the period of exposure to the offending allergen, (*Hopkins 1999; Henry 2002; Dawson et al., 2002,*). In these cases also only the symptom is addressed which is the allergic response to an allergen. According to Nutritional Medicine theory, the deeper causes of allergies are usually located at the cellular level and are responsible for an imbalance or malfunctioning of the immune system which over-reacts, often, to natural substances in our environment and in the food we eat, that are not normally harmful (*Balch & Balch 2000; Plaskettt 2004; Yarnell 2000; Ballentine 1978*) . Different people may have different deeper causes for this immune over-reaction, influenced by various factors such as nutritional, gastrointestinal and mucosal, neurogenic, psychoemotional, endocrinologic, environmental, xenobiotic and so on (*Libby 2005; Werbach & Moss 1999; Plaskettt 2004; Murray 1996; Ballentine 1978; Pizzorno et al., 2002*) (*Appendix 3*)

Syndromes

The word syndrome is often used to describe health problems for which a specific disease cannot be identified. As shown in the table a number of syndromes were diagnosed. More specifically:

Irritable bowel syndrome: Nineteen patients (P3, P4, P5, P7, P10, P15, P20, P21, P22, P26, P27, P33, P38, P39, P42, P44, P46, P47, P50)

Premenstrual Syndrome: Eight patients (P11, P18, P19, P20, P23, P26, P30, P31)

Neck Syndrome: One patient (P14)

Chronic Fatigue Syndrome: Two patients (P46, P49)

As can be seen in the table, Syndromes do not receive specific prescriptions apart from some cases with painkillers or antidepressants, **(***Appendix 3***)**

Above findings are further strengthened by Finding One of the Survey which demonstrated that people, despite official evidence for having longer live expectancies, do not become healthier under the current circumstances. Recalling the results of Finding One:

- From those who stated as 'had one or more problems' for which they had a treatment :
    - 57.1% state as 'not cured completely and 42.9% stated as 'cured completely' (**Chart 2: Percentage of persons cured completely after treatment***)*
    - From those stating as 'not cured completely' 81.2% still take medication and 18.8% stopped their medication without being completely cured (**Chart 3: Persons who claim they were not cured)**
    - From those stating as 'cured completely' 15.3% still take medication (**Chart 5: Persons who claim they were cured completely**)
- From those who stated as 'never had, or have now, any health problems,

- 56.8% take medication (**Chart 4: Persons who claim have no health problems)**

The failure to consider all determinants of health and disease, including those falling outside the narrow barriers of the traditional health sector is also often criticised in literature.

The Survey provided adequate evidence to support the importance of a number of factors as determinants of disease. As already demonstrated and discussed in Finding One, much lower incidence of chronic disease was reported by people living in rural areas rather than those in urban areas. In **Chart 7: Area of Residence and health problems** (see Finding One above) as well as in **Table 10: Urban/Rural and Chronic Health Problems** it is clearly demonstrated that cancer, prostate, fungal infections, hypertension, hypercholesterolemia, bowel problems, obesity, cardiovascular disease, depression, osteoporosis, skin problems, and asthma, appear much more frequently in urban areas rather than rural. On the contrary, drug addiction, allergies, and kidney disease were more frequent in rural rather than urban areas. A number of common health problems, occur in both areas with smaller differences, such as arthritis, gynaecological disorders, stomach problems, diabetes, thyroid problems, cholelithiasis and uric acid disorders. Interestingly, a number of common problems of a more psychosocial character, such as stress, headaches, and insomnia appear in both areas, with small differences,

TABLE 10: URBAN/RURAL AND CHRONIC HEALTH PROBLEMS

% IN EACH CATEGORY SUFFERING FROM A SPECIFIC HEALTH PROBLEM

HEALTH ISSUE	URBAN	RURAL
STRESS	18.0%	15.3%
HEADACHES	11.0%	9.5%
HYPERTENSION	**11.3%**	**7.3%**
ALLERGIES	**7.9%**	**10.9%**
CHOLESTEROL	**9.5%**	**3.6%**
ARTHRITIS	**7.3%**	**7.3%**
INSOMNIA	6.7%	5.1%
BOWEL PROBLEMS	**6.7%**	**4.4%**
OBESITY	6.1%	4.4%
CARDIOVASCULAR	6.1%	4.4%
OTHER PROBLEMS	6.1%	2.9%
GYNAECOLOGIC PROBLEMS	4.9%	5.8%
STOMACH PROBLEMS	4.9%	3.6%
DIABETES	4.0%	5.1%
CONSTIPATION	3.7%	5.8%
DEPRESSION	**4.9%**	**2.2%**
OSTEOPOROSIS	**4.9%**	**1.5%**
SKIN PROBLEMS	**4.0%**	**2.2%**
ASTHMA	**3.4%**	**1.5%**
THYROID PROBLEMS	2.4%	2.2%
DRUG ADDICTION	**1.8%**	**3.6%**
CHOLELITHIASIS	2.1%	2.9%
FUNGI	**3.4%**	**0.0%**
CANCER	**3.4%**	**0.7%**
KIDNEY DISEASE	**1.2%**	**2.2%**
URIC ACID	0.6%	0.7%
PROSTATE	**3.0%**	**0.0%**

Education was also found to be an important determinant of chronic disease (**Table 7: Education and health problems).** Apparently, the incidence of chronic disease is much higher among those with elementary education, falling gradually with high school graduates and further reduced at college/university level. Greater gaps were indentified in diseases, such as cardiovascular disease, hypertension, diabetes, osteoporosis, drug addiction,

arthritis, hypercholesterolemia, obesity, cholelithiasis, uric acid disorders. Interestingly, stress appears equally at all levels, while headaches and constipation are more frequent among college/university graduates. Depression is more frequent in high school graduates

TABLE 7: EDUCATION AND HEALTH PROBLEMS

HEALTH PROBLEM	ELEMENTARY	HIGH SCHOOL	COLLEGE/ UNIVERSITY
STRESS	17.0%	17.3%	17.2%
HEADACHES	9.6%	9.5%	13.9%
HYPERTENSION	23.4%	8.6%	2.6%
ALLERGIES	7.4%	9.4%	8.6%
HYPERCHOLESTEROLEMIA	12.8%	7.1%	5.2%
ARTHRITIS	17.0%	4.7%	5.2%
INSOMNIA	7.4%	5.8%	6.0%
BOWEL PROBLEMS	8.5%	4.7%	6.9%
OBESITY	10.7%	4.7%	3.5%
CARDIOVASCULAR	18.1%	2.7%	1.7%
OTHER PROBLEMS	8.6%	3.6%	6.1%
GYNAECOLOGICAL	7.5%	4.3%	5.2%
STOMACH PROBLEMS	6.4%	3.9%	4.3%
DIABETES	13.8%	2.4%	0.9%
CONSTIPATION	2.1%	4.3%	6.0%
DEPRESSION	3.2%	5.1%	2.6%
OSTEOPOROSIS	12.9%	1.6%	1.7%
SKIN PROBLEMS	1.0%	4.3%	3.4%
ASTHMA	3.2%	2.0%	4.3%
THYROID PROBLEMS	3.5%	2.2%	2.8%
DRUG ADDICTION	7.6%	1.6%	0.0%
CHOLELITHIASIS	4.3%	2.0%	1.8%
FUNGI	3.2%	1.6%	3.5%
CANCER	3.0%	2.2%	2.4%
KIDNEY DISEASES	2.1%	1.2%	1.7%
URIC ACID	2.0%	0.4%	0.0%
PROSTATE	0.0%	0.4%	0.0%

Family income was also found to be a strong predictor of the incidence of chronic disease (**Table 3: Family income and health problems)**. Significant negative correlations were shown between family income and arthritis,

cardiovascular problems, and other problems (at 1% significance level 2-tailed); also negative correlations were shown (at 0.5% significance level 2-tailed) with stress, skin problems, drug addiction, and cancer. The only positive correlation, significant at 1% level 2-tailed, was found between those stating as having 'no-health problems' and family income

TABLE 3: FAMILY INCOME AND HEALTH PROBLEMS

HEALTH ISSUE	PEARSON CORRELATION	SIGNIFICANCE (2-TAILED)	CONCLUSION
NO PROBLEMS	0.201	0	YES AT 0.01 LEVEL
ARTHRITIS	-0.135	0.004	YES AT 0.01 LEVEL
CARDIOVASCULAR PROBL.	-0.130	0.005	YES AT 0.01 LEVEL
OTHER PROBLEMS	-0.145	0.002	YES AT 0.01 LEVEL
STRESS	-0.103	0.028	YES AT 0.05 LEVEL
SKIN PROBLEMS	-0.098	0.037	YES AT 0.05 LEVEL
DRUG ADDICTION	-0.117	0.012	YES AT 0.05 LEVEL

Family status was also demonstrated to be a determinant of disease (**Table 11: Family status and health problems).** It should be noted that conclusions can mainly be reached for the married and divorced, as singles tend to be mostly young people and widowers mostly old. Divorced people appear to suffer more frequently than other population groups from several common chronic problems, such as stress, allergies, bowel problems, obesity, gynaecological problems, depression, skin problems, asthma, thyroid problems, and cancer. In some diseases the gap is more apparent, as in the case of depression, allergies, obesity, and bowel problems. Some chronic problems appear more frequently amongst married people such as headaches, hypercholesterolemia, stomach problems, drug addiction, and fungus infections

TABLE 11: FAMILY STATUS AND HEALTH PROBLEMS

PERCENTAGE IN EACH CATEGORY SUFFERING FROM A SPECIFIC HEALTH PROBLEM

HEALTH ISSUE	MARRIED	SINGLE	WIDOWER	DIVORCED
STRESS	17.6%	14.1%	21.4%	21.1%
HEADACHES	11.8%	9.4%	0.0%	0.0%
HYPERTENSION	10.4%	2.4%	50.0%	10.5%
ALLERGIES	9.0%	5.9%	7.1%	21.1%
HYPERCHOLESTEROLEMIA	9.5%	1.2%	7.1%	5.3%
ARTHRITIS	8.1%	2.4%	28.6%	0.0%
INSOMNIA	6.6%	2.4%	14.3%	10.5%
BOWEL PROBLEMS	6.4%	3.5%	0.0%	15.8%
OBESITY	5.8%	1.2%	14.3%	15.8%
CARDIOVASCULAR	6.6%	0.0%	14.3%	5.3%
OTHER PROBLEMS	4.6%	4.7%	28.6%	0.0%
GYNAECOLOGIC	6.4%	0.0%	0.0%	8.3%
STOMACH PROBLEMS	5.8%	1.2%	0.0%	0.0%
DIABETES	4.9%	0.0%	14.3%	5.3%
CONSTIPATION	4.0%	5.9%	0.0%	5.3%
DEPRESSION	4.0%	0.0%	7.1%	21.1%
OSTEOPOROSIS	4.6%	0.0%	14.3%	0.0%
SKIN PROBLEMS	3.5%	3.5%	0.0%	5.3%
ASTHMA	3.2%	1.2%	0.0%	5.3%
THYROID PROBLEMS	2.9%	0.0%	0.0%	5.3%
DRUG ADDICTION	3.2%	0.0%	0.0%	0.0%
CHOLELITHIASIS	2.9%	1.2%	0.0%	0.0%
FUNGI	3.2%	0.0%	0.0%	0.0%
CANCER	3.2%	0.0%	0.0%	5.3%
KIDNEY DISEASES	2.0%	0.0%	0.0%	0.0%
URIC ACID	0.9%	0.0%	0.0%	0.0%
PROSTATE	0.3%	0.0%	0.0%	0.0%

Obesity was also found to be a strong determinant of disease (**Table 1b: Correlation between BMI and health problems (extended))**, with significant positive correlations with many chronic health problems such as hypertension, hypercholesterolemia, cholelithiasis, depression, fungus infections, diabetes, arthritis, cardiovascular problems, insomnia, cancer and thyroid problems; many chronic health problems however, equally common amongst the Cypriot population, were found to have no specific correlation with obesity demonstrating the importance of other than obesity factors of

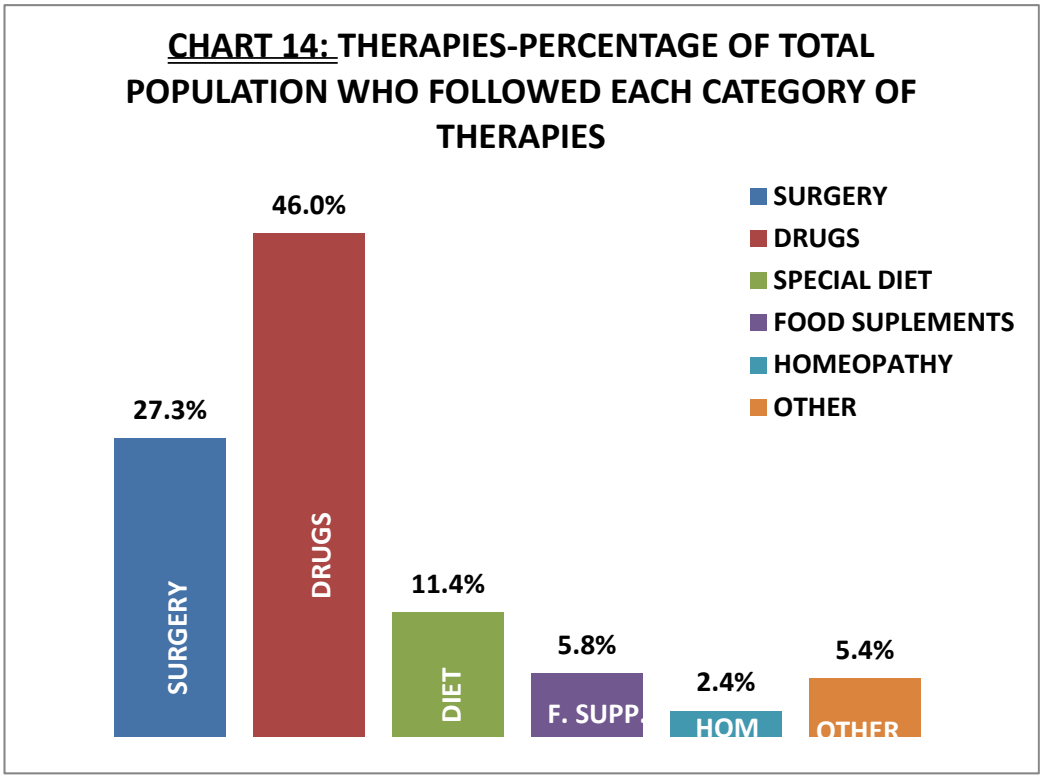
disease. These include: osteoporosis, asthma, prostate, headaches, skin problems, uric acid, bowel problems, stress, kidney, gynaecological problems, constipation and allergies.

TABLE 1b: CORRELATION BETWEEN BMI AND HEALTH PROBLEMS(extended)

HEALTH PROBLEM	PEARSON CORRELATION	SIGNIFICANCE (2-TAILED)	CONCLUSION
DRUG ADDICTION	0.320	0	YES AT 0.01 LEVEL
HYPERTENSION	0.263	0	YES AT 0.01 LEVEL
HYPERCHOLESTEROLEMIA	0.195	0	YES AT 0.01 LEVEL
CHOLELITHIASIS	0.177	0	YES AT 0.01 LEVEL
DEPRESSION	0.173	0	YES AT 0.01 LEVEL
FUNGI	0.156	0.001	YES AT 0.01 LEVEL
DIABETES	0.149	0.001	YES AT 0.01 LEVEL
ARTHRITIS	0.146	0.002	YES AT 0.01 LEVEL
CARDIOVASCULAR PROBL	0.135	0.003	YES AT 0.01 LEVEL
INSOMNIA	0.130	0.005	YES AT 0.01 LEVEL
CANCER	0.113	0.015	YES AT 0.05 LEVEL
THYROID PROBLEMS	0.099	0.032	YES AT 0.05 LEVEL
STOMACH PROBLEMS	0.095	0.041	YES AT 0.05 LEVEL
OSTEOPOROSIS	0.081	0.081	NO
ASTHMA	0.075	0.107	NO
PROSTATE	0.057	0.218	NO
HEADACHES	0.050	0.278	NO
OTHER PROBLEMS	0.046	0.319	NO
SKIN PROBLEMS	0.042	0.364	NO
URIC ACID	0.041	0.381	NO
BOWEL PROBLEMS	0.031	0.508	NO
STRESS	0.030	0.525	NO
KIDNEY DISEASES	0.015	0.751	NO
GYNAECOLOGIC PROBL	-0.008	0.869	NO
CONSTIPATION	-0.021	0.658	NO
ALLERGIES	-0.027	0.556	NO

The over-dependence on drug and surgery approaches, largely underplaying the role of diet and lifestyle, particularly in the area of chronic disease prevention and treatment, frequently criticised by other researchers was

also confirmed by this research. In Finding Two (**Chart 14: Therapies-percentage of total population who followed each category of therapies)**, it was clearly demonstrated that Drugs and Surgery are the first and second resorts to treatment by Cypriots with large difference from the other, considered non-conventional, treatments. In particular 46.0% of the population resorts to Drugs and 27.3% to Surgery for treatment of specific health problem. Other treatments fall far below, with Special diet used by 11.4%, Food supplements by 5.8%, homeopathy by 2.4% and other therapies by 5.4% of the population.



This finding was further supported by my Clinical Practice case studies analysis (**Table 9: Nutritional and Drug Prescriptions by Doctors)**, as the majority of patients (88%) were prescribed pharmaceutical treatments with only 14% of them being offered other than medical prescriptions, mostly consisting of calcium, iron, and multivitamin supplements. Dietary treatment was prescribed to only 2% of them consisting of avoidance of specific foods and always along with their pharmaceutical treatment. Worth noting is that

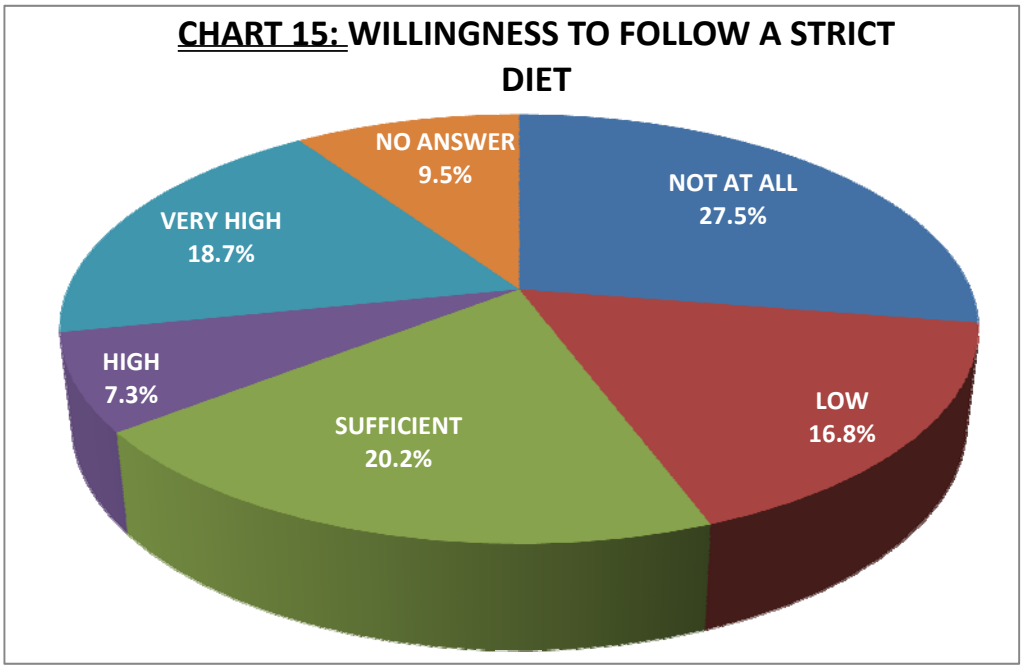
in all cases of other than medical treatments, these were prescribed alongside with drug prescriptions.

TABLE 9: NUTRITIONAL AND DRUG PRESCRIPTIONS BY DOCTORS
(50 randomly selected cases from Clinical Practice)

TYPE OF ADVICE	Number of patients	Percentage of total number of patients
No nutritional advice	**43**	**86%**
◗ **With drug prescription**	37	74%
◗ **Without drug prescription**	6	12%
Calcium supplements	**2**	**4%**
◗ **With drug prescription**	2	4%
◗ **Without drug prescription**	0	0%
Iron supplements	**2**	**4%**
◗ **With drug prescription**	2	4%
◗ **Without drug prescription**	0	0%
Calcium and Iron supplements	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%
Multivitamins	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%
Avoidance of foods	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%

The fact that this order of treatment is 'imposed' by the system and not 'preferred' was confirmed by other findings of the research. In **Chart 15: Willingness to follow a strict diet** it was demonstrated that 46% of the

population would accept to follow a strict diet for therapy, if that was offered to them, or could afford it (high income) or if they were informed about it (educated).



This last conclusion is derived from Finding Two above in **Table 5 : Age, Income, Education and Treatment correlations** where education and income were shown to be significantly positively correlated with dietary and nutritional supplement treatments, and education to be significantly negatively correlated with pharmaceutical treatments. In addition, there was a clear statement by the Officials of the HIO during the Interviews that allowed no doubt for the exclusive use of Drug and Surgery approaches by modern medical practice in Cyprus. It was specifically stated that, no other, than Drug, Surgery and other biomedical, therapies are planned to be included at the moment into the National Health Insurance Scheme as these are the only ones considered as part of common medical practice in Cyprus.

Concluding, all the above findings demonstrate that patients with multiple chronic conditions, often intricately interacting between physical, mental,

and psychological levels, are a fact. The same is true for their expectations for a more caring approach, more person-centred and beyond labelled diseases. In addition, the desire for more choices of treatment, such as those based on dietary and lifestyle changes, not rarely in conjunction with their medical therapies was evident A volume of evidence in literature has demonstrated that the human body works as a functional systemic whole, within a dynamic complex environment and cannot be always understood by knowing only one part of it (*Literature Review & Evidence of Achievement*). This fact underlines the importance of the General Practitioner which appears to have been undermined for the sake of high specialisation -without of course ignoring the merits of specialisation, particularly in the area of acute disease

5.3. OBJECTIVE THREE- NUTRITIONAL MEDICINE

To examine and critically evaluate evidence on the effectiveness of Wholistic Nutritional Medicine, in both the prevention and the treatment of chronic disease. Also to investigate the extent to which evidence-based nutritional interventions are effectively applied within the current setting of the provision of healthcare and if contemporary healthcare professionals are adequately educated and trained for these, through their classical medical education and clinical portfolio. To evaluate public and political perceptions in Cyprus on these issues

5.3.1. Finding Five

The volume of evidence in literature supporting the role of Nutritional Medicine as a vital partner of Modern Medicine, especially in the prevention and treatment of chronic disease, was further confirmed by the analysis of 50 randomly selected case studies from my Clinical Practice. From a critical perspective, a number of, both negative and positive, issues, emerging from the application of Nutritional Medicine in Clinical practice are discussed

A patient's case study is also provided as an example from the author's clinical practice in Appendices 14-19.

For evidence in literature on Finding FIVE please refer to:

In THIS REPORT,
Chapter 2.3. NUTRITIONAL MEDICINE

In the EVIDENCE OF ACHIEVEMENT
Part IV: THE WHOLISTIC NUTRITIONAL MODEL OF MEDICINE
Part VI: NUTRITIONAL MEDICINE PRACTICE IN THE NEW PARADIGM

QUALITATIVE ANALYSIS AND DISCUSSION ON THE 50 RANDOMLY SELECTED CASES FROM MY CLINICAL PRACTICE

FOR THIS FINDING PLEASE REFER TO THE BELOW APPENDICES

Appendix: 3: Medical prescriptions for specific health problems and

Appendix: 4: Patients' nutritional treatment success

Also in Appendices 14-19 a patient's FULL CASE STUDY is also provided (anonymously) as an example from the author's clinical practice

The findings from the analysis of the fifty randomly selected case studies from my clinical practice demonstrated adequate evidence of the positive effects of Nutritional Therapy using dietary programmes, lifestyle changes and nutritional supplements. The whole process from the first consultation until the completion of the treatment is critically discussed with examples from the 50 cases

In **Appendix 4: Patients' nutritional treatment success,** the first column of the table titled Patient's View of his/her Health Status demonstrates the patients' view of their disease and the way they perceive their chronic suffering from different symptoms. The second column shows the Nutritional Medicine Diagnosis after evaluating of the patient's case history. The third column lists the Aims of Treatment which are based on the Diagnosis, and on the basis of which the Treatment is designed. The fourth column is the Length of Treatment which usually takes several weeks, followed by the column Means of Treatment which describes the tools of the treatment. The sixth column demonstrates the Patient's Comments after Treatment, which is their view of their health status after finishing or abandoning treatment, and the last column My Comments after Treatment, contains the comments of the nutritional practitioner after the patient has finished or abandoned their treatment.

The first column ***Patient's View of his/her Health Status***, in **Appendix 4: Patients' nutritional treatment success,** represents data obtained during the first consultation as viewed by the patient, and not as identified by different tests and reports, without of course underestimating the important of these diagnoses. On the contrary, all previous medical history, including other doctors' diagnoses, biochemical reports, past medical or other non conventional treatments, as well as the patient's family history were also requested and seriously considered as important data in the formulation of the Nutritional Medicine Diagnosis. The patients' view of their health, however, always represents an important factor in Nutritional Medicine and in the present analysis effort was made to avoid recording specific 'labelled diseases' (eg. arthritis, osteoporosis, asthma, gastritis, etc) as often presented by the patients on the basis of previous diagnoses they had. The ability of the Nutritional Medicine Practitioner to see with 'clear' mind 'beyond labels' is very important for a correct NM Diagnosis. For example, patients P2, P3, P5, P7, P15 and others, complain for different gastrointestinal (GI) problems and this is what is quoted here, in spite of the fact that most of them had already been diagnosed with different labelled diseases for their specific problems such as 'gastritis', 'irritable bowel syndrome', 'chronic constipation', or 'Gastroesophageal Reflux Disease' (GERD). Similarly, patients with frequently blocked nose causing them frustration, are often diagnosed with a 'nose diaphragm problem' and referred to surgeon. This is case for patients P7, P10, P18, P23, P33, P34, and P38. Related problems from which many people suffer in the modern times, are a number of chronic symptoms of the respiratory tract, such as dyspnoea, coughing, respiratory congestion, face pains etc, diagnosed as' asthma', 'sinusitis', 'allergic rhinitis', or with the more general term 'allergies' as in patients P4, P17, P25 P43, P44, and P46. (**Appendix 3: Medical prescriptions for Specific Health Problems***).*

A closer look at the second column of **Appendix 4: Patients' nutritional treatment success**, titled ***Nutritional Medicine Diagnosis,*** demonstrates an entirely different perception of evaluating a patients' condition, focussing,

not only on ‘what is’, but ‘how’ and ‘why’ it is. In other words, the main effort is to ‘trace the patient’s pathway of disease’, the onset of which might be located several years before, not rarely a few generations backwards. The NM Diagnosis is a process that usually takes several hours, with intensive and exhaustive examination of all available data, evaluation of the patient’s past diagnoses by other practitioners, as well as research into new evidence related to the specific problems of the patient. Attempt is made to look ‘beyond labels’, as stated above, and identify weak, compromised, or malfunctioning systems/organs, metabolic imbalances, nutrient deficiencies/excesses, inherited traits, and sites of toxicity, usually hiding beneath the patients complains. It is worth noting that Nutritional Medicine practice never relies on single symptoms for reaching concrete conclusions, but deeply investigates the whole case history for more evidence on the basis of a patient-centred approach. Similar symptoms between different patients, such as a headache, might not always denote the same deeper causes, and therefore requiring different approaches. What is important is to go beyond the epistemology of manifestations and look at the patient as a ‘whole person’ entirely distinct from any other individual, with unique biopsychosocial interactions with the surrounding environment, and uncommon functional interrelationships between the physical, emotional and psychological systems/processes within his/her body, specific only to the particular individual. Most of the time, patients visit the clinic for a specific health problem, such as chronic skin rashes, or chronic asthma, and this is what they report during the first consultation, often stating that they don't have any other problems. The skilled practitioner, however, can elicit much more information than what is manifested as symptoms, through a highly professional interview, and the establishment of a good therapeutic relationship with the patient. Several problems often appear which, at first sight, seem entirely unrelated between them. For example patient P14 complained only for a strange trembling of his hands for which he had different medical diagnoses, including the possibility (though not clinically confirmed) for Parkinson’s’ Disease. Taking his case history, and ‘digging’ into

the facts of his life, his chronic exposure to toxic chemicals was revealed, a piece of information he never before thought necessary to report to any of the practitioners. Also patient's P4 major concerns during the first consultation were her failure to become pregnant (she has been trying for several years) and her chronic respiratory discomfort, diagnosed as 'asthma'. The case history, however revealed the real cause of most of her problems which was the severe dysbiosis (bowel flora imbalance) which caused malabsorption and mineral deficiencies, as well as well as an imbalance in the immune system. It is important to remember that, part of the immune's surveillance system resides in the bowel (*Peyer's patches*), and also that most allergies are an over-reaction of the immune system to unrecognised bodies in the patient's body. The fact that this patient was completely relieved from asthma attacks, stopped using inhalers and became pregnant after 5 months of treatment confirms that the diagnosis was correct. Similarly, patient P5 whose bowel was partly damaged from accident, visited the clinic for a dietary programme to relieve his bowel problems which made him very unhappy and depressed. At that time the only foods he could eat were boiled meat, boiled potatoes and a small selection of boiled vegetables (no fruit, no fresh vegetables, no beans etc). A careful examination of his case history, revealed that the underlying cause of all his problems was his immune system and not his bowel. Until then he had recurrent operations to remove parts of his bowel which was infected leading to adhesions and fistulae. The only advice he had after the operations was to avoid the foods that caused him discomfort. The Nutritional Medicine diagnosis was confirmed from the results of the treatment, after which no more bowel infections appeared for years. Should he had been referred to a nutritional therapist immediately after the first operation, he would have avoided a lot of trouble and inconvenience that disturbed his life for years. Another example is that of those patients who complain for musculoskeletal pains and/or stiffness. A closer look at **Appendix 4: Patients' nutritional treatment success**, demonstrates that most of them have also chronic gastrointestinal problems, which denotes dysbiosis (*unbalanced bowel flora and hypotonic*

gastrointestinal environment) leading to malabsorption and mishandling of calcium and other nutrients. The result is deposition of calcium salts at the wrong sites causing the formation of stone in different tissues of the body causing pain and stiffness. This appears to be the case for patients P2, P6, P8, P9, P15, P16, P18, P19, P22, P23, P24, P25, P26, P28, P30, P31, P32, P33, P38, P39, P41, P42, P43, P44, P45, P46, P47, and P50. In the case of patients P2 & P15 stone formation is evident also from the diagnosed cholelithiasis in the former, which forced her to have her gallbladder removed, and the breast calcifications in the latter. Calcifications together with bone degeneration, and musculoskeletal pains, are evident also in patients P26 & P31 demonstrating the fact that the body has adequate amounts of calcium, however, it mishandles it calcifying the wrong tissues. Calcium mishandling may also lead to weak bones diagnosed as 'osteopenia' or 'osteoporosis', as it appears to happen with some of the above patients, particularly P6, P24, P25, P26, P43, P45, (**Appendix 3: Medical prescriptions for Specific Health Problems***)*. A look at **Appendix 4: Patients' nutritional treatment success**, demonstrates that. However, this is not the case for patient P12, who appears to have a kidney malfunctioning problem evident from the rest of his medical history, such as high uric acid and gout and requires a different approach to treatment from all others having the same symptoms. Also patient P14 who also complained for musculoskeletal pains appears to be an entirely different case from all others, since a careful evaluation of his case history demonstrates severe mineral deficiencies/imbalances in his body due to chronic exposure to chemicals from spraying in his family farm without protective measures. This case also requires a different approach from the all others.

As the third column of **Appendix 4: Patients' nutritional treatment success**, titled ***Aims of Treatment,*** demonstrates, the target of the NM treatment lies much deeper than the patient's symptom, along with NM diagnosis. Effort is made to restore the body's biochemical functions, such as restoring metabolic balance and mineral deficiencies, enhancing immune function,

stimulating liver function, in an attempt to assist the body to 'throw out' excess toxicity which prevents its normal functioning. For example patient P13 complained mainly for tiredness and for occasional numbness on feet. He visited the clinic for a detoxification programme, stating that he does not really have any serious problems. However the Nutritional Medicine diagnosis revealed a number of deeper problems, such as Lipid mishandling and Calcium dumping which led particularly to the hardening of his circulatory system. The circulatory problem had been also suspected by his doctor who had already warned him for possible Coronary Artery Disease. This disease is caused by atherosclerosis, in which Calcium plays a prominent role together with fats and other substances. Atherosclerosis causes hardening and narrowing of the arteries reducing the flow of oxygen to the heart and lungs causing symptoms of fatigue for which the patient had complained, (**Appendix 3: Medical prescriptions for Specific Health Problems**). The results of his nutritional therapy which targeted at restoring the body's handling of calcium confirmed the diagnosis. An important part of the ***Aims of Treatment*** process is the restoration of gastrointestinal function which is of utmost importance for the breakdown of food and absorption of essential nutrients for metabolic functions, such as calcium, as well as for the balanced functioning of the immune system. Restoration of proper bowel function is achieved by providing the correct acidic environment, which discourages the bad bacteria and encourages the beneficial bowel flora to survive and multiply and then they take over in a multitude of functions. (*The importance of the bowel population is discussed in the* ***Evidence of Achievement, Section Four, Part II, Chapter I,*** *and in* ***Section Five, Part II, Chapter Two****: Evaluating nutrient deficiencies & in Chapter Three, The Synergistic Action of Nutrients and in the long description of the Diseases that follow*). For example, patient P27 visited the clinic for her panic attacks and phobias. During the course of the interview her severe dysbiosis (bowel flora imbalance) was revealed, as well as her liver toxicity and adrenal exhaustion. These problems, were hidden behind her panic attacks and phobias which eventually disappeared after targeting the deeper causes and not the manifestations. The same applies for

patient P16 who had deeper physical causes hidden behind her depression, and particularly for patient P48 who was under psychiatric therapy for several years. It is worth noting of course that patient's P48 psychiatric problems were not entirely eradicated by the 'cleansing' of his body and the restoration of metabolic function helped him reduce his antidepressants and live a better life, without completely abandoning his medical treatment, (**Appendix 4: Patients' nutritional treatment success)**

The fourth column of (**Appendix 4: Patients' nutritional treatment success)** demonstrates the ***Length of Treatment*** which usually takes several weeks often months. Worth noting here is that this time is not actually a 'cure time'. To explain this one needs to understand that 'complete cure' of a patient cannot be achieved in a few weeks or even few months. Patients who have been accumulating toxic material in their bodies for years, often all their past life, and, not rarely, inherited toxicity from their ancestors, may need the rest of their life, and even that may not be enough, to cleanse their body and restore functions. The same is true for malfunctioning or underfunctioning organs or systems, often inherited as such. The table demonstrates great differences in length of time. The duration of each patient's programme depends on a number of factors related to the specific health problems and the type and intensity of nutritional treatment of each one, as well as the special circumstances in their life allowing them to continue or forcing them to stop. Patient P38, for example completed the treatment in 10 weeks and was relieved from most of her problems because she was trained and did not abandoned the therapeutic principles of Nutritional Medicine. On the contrary patient P43 struggled for 20 weeks to achieve a better health status, however she did not manage to keep her healthy diet and lifestyle for long and her problems began to reappear. What is most important is that even a small length of treatment, such as six weeks, followed by a sensible diet and lifestyle for the rest of their lives may have better results than a strict treatment of several months after which the patient goes gradually back to the old bad habits. The example of patient P8

is characteristic. Although he had a treatment for only 8 weeks he was adequately trained for the rest of his life. Similarly patient P34 was also trained in 10 weeks. Oppositely to patient P32 who had the same duration of treatment but return to the bad habits soon after.

The next column of (**Appendix 4: Patients' nutritional treatment success)** ***Means of Treatment*** demonstrates that all nutritional therapies consist basically of nutritional and lifestyle means in different combinations and intensities for each patient depending on the diagnosis that preceded. From a critical perspective on this issue of Nutritional Medicine Practice, it should be admitted that it is the most difficult and much debated part of Nutritional Therapy. Long discussions are often needed to convince the patient who has been taking for several years, only a single pill to keep their blood pressure or blood sugar at normal levels, that they have to transform their whole life and often swallow a handful of vitamins with their meals for several weeks for this particular therapy. Restoring proper functioning needs effort and time and strict focus on the correct food and lifestyle habits and from my experience as a nutritional therapist this not feasible for a large part of the population for several reasons, including, the special circumstances in their life (as patients P3 and P31), high cost of healthy foods and nutritional supplements (patients P7, P21, P29), getting tired of too many supplements (patient P18), and the need to be often 'isolated' and unsociable' in order to keep going contrary to family and friends diets and lifestyles (patients P43, P44). The difficulty to keep to healthy diets and lifestyles is confirmed by literature, which demonstrates the volume of exogenous toxicity with which modern humans have to struggle on a daily basis, (*see* ***Evidence of Achievement, Part VI, Chapter V: Exogenous oxidative Stress: food chain and environmental inputs***), as well as the high costs of healthy foods compared to unhealthy ones (see ***Evidence of Achievement, Part I: Chapter I: Health and Disease Facts***). My Survey had demonstrated (in **Finding Two: Chart 15: Willingness to follow a strict diet)** that the majority of Cypriots would accept to follow a strict diet, instead of drugs, in order to get rid of

their health problems, (and there can be no reasonable doubt that this might be a genuine willingness). However my experience as a nutritional therapist demonstrated that only when people actually embark on a nutritional therapy programme come to realize the huge effort and strong will required to live a life different from most of the other people around them and the struggle to avoid toxicity and to find absolutely healthy foods free from additives, pesticides, and a host of other chemicals. This parameter of the therapy is always explained to the patient during the first consultation. The whole process is presented to the patient in advance during the first consultation, explaining to them that, what the nutritional therapist can do for them is to identify where their problem lies, and to provide them with the necessary tools... and 'the battle is theirs'. Patients need to understand that there no 'magic bullets' to achieve health. They need to realize from the beginning that they should turn a new page in their lives, and significantly transform their whole philosophy of eating and living. Radical changes in diet and lifestyle habits should be their primary concern, and not embarking on a programme for a certain period, looking forward when they will be allowed to go back to their old habits. As discussed in the Project Activity Chapter (*paragraph 4.4 above*), the 50 cases included in this analysis, were randomly selected from 120 cases which were considered eligible for inclusion and analysis based on the degree of adherence to the principles of the prescribed treatment and on a minimum length of treatment (3 consequent consultations including the first one). The fact that only 120 cases, out of the 600 available at the clinic, met the criteria for inclusion, demonstrates how the high willingness gives way to disappointment and abandoning of nutritional therapy. There are some patients, of course, who return after abandoning their therapy, equipped with more courage and confidence that they can carry out this endeavour successfully and they often do so, as is the case of patients P16, P31, and P45.

An important consideration in designing the treatment are the patients' already prescribed drugs or other therapeutic means, by other practitioners.

A competent practitioner can be compared with a competent cooker who uses her intelligence and expertise to prepare a delicious meal out of the ingredients available in her kitchen and not of the ones she would like to have. The good practitioner needs to think how s/he can best help the patient, using his/her expertise and intelligence to design a new lifestyle for the patient and at the same time being adequately flexible to accept and incorporate into the programme all pregiven data that cannot change. Patients are always active participants in their treatments and should be free to choose: 1)whether they want to proceed with the specific therapy, even after it is prepared, 2) to present their reservations, intolerances, dislikes and possible pregiven realities of life from which they might need time to escape. Taking into consideration all concerns of the patient and preparing programmes that help the patient to gradually enter the new life, increases the number of successful treatments and happy patients. A few examples from (**Appendix 4: Patients' nutritional treatment success)** confirms this. Patient P3 despite her serious thalassaemia and her weekly blood transfusions she was keen to have a nutritional therapeutic programme. The programme prepared for her was of moderate therapeutic intensity focussing predominantly on restoring bowel function to assist mineral absorption and on specific guidelines for reducing the body's absorption of iron. Although she did not manage to complete her therapy she felt very well and some of her problems, such as constipation, bloating and indigestion disappeared. Patient P28 had several problems, however, due to her busy lifestyle she found it impossible to embark on an entirely transformed diet and lifestyle. Seriously considering her reservations, a programme was designed to her specific lifestyle. It is worth noting, however, that some of the therapeutic principles of a NM cannot be always compromised, as is the consumption of dairy products, otherwise the patient will be disappointed from 'no progress' and soon give up. Some patients, find it entirely impossible to give up some foods such as dairy products, or salt, and these are the ones who do not return after receiving their prescription. These were among the cases not included in this analysis. Other patients, although they do not mind to

eliminate foods such as dairy products from their diets, they find it very difficult to be under the 'continuous stress' to make sure they do not ingest those foods, especially if the preparation of their daily meals is at the hands of somebody else or they eat out most of the times. The contribution of members of the patient's family is very important in this case, otherwise the treatment is destined to fail. Effort is made in many of these cases to prepare an initial flexible programme, allowing many of the 'restricted foods' in smaller quantities, hoping that the patient will gradually manage to embark on more changes, especially if these small changes produce some beneficial results to their health. Patient 28 made a significant improvement because she managed to stay away of some of the most strictly restricted foods, such as dairy products and alcohol, because the specific circumstances of her life allowed her (she never consumed alcohol due to religious principles). Although she often had some relapses, she greatly improved her health and this encouraged her to continue. Patient 29, was also prescribed a moderately intense therapeutic programme, due to her financial situation which prevented her from buying all the nutritional supplements required for her therapy. The fact that could embark on stricter dietary and lifestyle habits, compensated, to a small but significant degree, for the lack of some nutritional supplements and helped her have a good improvement to her health problems.

The ***Patient's Comments after Treatment*** are cited in the next column of (**Appendix 4: Patients' nutritional treatment success)** to demonstrate their perceived health status after their therapy. It is important to mention here that in most cases the patient is referred back to their doctors or clinical laboratories, after their nutritional therapy, to confirm their improvement through a medical diagnosis or clinical tests. This is particularly necessary in patients with problems such as, hypertension, diabetes, osteoporosis etc. In addition, in the case of patients who are already monitored by another practitioner, they are always adequately informed, often in writing, about the

nutritional therapy and the expected results, drawing their attention to the possibility of the need to review the medication of their patients, if they have improvement from the nutritional treatment. A healthy diet and lifestyle together with the ingestion of high doses of vitamins and minerals, in the majority of cases, make people feel much better after a few weeks of healthy eating and lifestyle. This is a natural consequence from the new healthy habits and vitamins, however this is by no means considered a 'cure'. Completing the therapeutic programme, even if it takes several months, does not mean that the patient is cured. It only means that their body is prepared to self-healing. Success in Nutritional Medicine is translated to the empowerment of the patient's body to cure itself, by supporting biochemical and metabolic processes, enhancing immune competency, restoring deficiencies/excesses, restoring the mechanisms for the breakdown and absorption of food, and stimulating the eliminatory organs. If the patient is 'TRAINED' to the therapeutic principles of Nutritional Medicine s/he will continue to improve towards cure for the rest of his/her life. The term '**therapeutic principles of Nutritional Medicine** denotes a diet and lifestyle that avoids, to the extent possible, the different toxins, either added to food during farming, manufacturing, and packaging or ingested from the environment, as well as those created from psychosocial factors (*for information of exogenous toxicity, see* ***Evidence of Achievement, Part VI. Chapter V: The Rationale for Nutritional Supplementation: Exogenous Oxidative Stress: food chain and environmental inputs)***

Worth noting however is that most of the patients suffering from blocked nose, after the nutritional treatment do not have this problem, or have it rarely, as it appears to be related to some kind of congestion that does not recur after the body is cleared from toxicity. This case is evident in patients P7, P8, P9, P18, P23, P33, P34, and P38. This is not the case of course for other patients, such as patient P10 who do not report relief in this problem, either because the 'diaphragm' diagnosis is correct or because she stopped

her therapy before completion, (**Appendix 4: Patients' nutritional treatment success***)*.

Respiratory symptoms evident in patients P4, P17, P25 P43, P44, and P46, which were chronically suppressed, but not eradicated, with anti-asthmatic drugs, anti-histamines and inhalers, appear most of the times to be significantly improved, or completely eradicated, after the nutritional detoxification therapy demonstrating the deeper cause of their symptoms. In particular patient P4 has no more asthma attacks and allergic rhinitis after 20 weeks of nutritional therapy, and the same is true for patient P17 after 17 weeks, patient P25 after 18 weeks and patient P56 after 34 weeks. On the contrary patient P43, who had made significant improvement, was not completely cured from her respiratory problems, because of her frequent relapses to her old bad habits, such as smoking. Similarly patient P44, who in spite of her good efforts to adopt a healthier diet and lifestyle for 20 weeks, most of which she continued after treatment, she did not give up smoking. Her respiratory problems although improved, were not cured, (**Appendix 4: Patients' nutritional treatment success***)*.

The last part of this discussion will focus on the last column and particularly on the concept of TRAINING THE PATIENT **Appendix 4: Patients' nutritional treatment success***)*. A nutritional therapy can be only considered 'successful' if the therapist succeeded to make the patient a new transformed person. The training of the patient, is perhaps the most important outcome of a nutritional therapy, since, as discussed above, the length of treatment is not a criterion for treatment, which is most of the time a life-long process, which needs a TRAINED patient for the rest if their lives. Training the patient is one of the most important tasks of the nutritional practitioner, otherwise, if the patients return to their old bad habits they run a high risk of developing the same of new problems again. It might take them some time to return but eventually they will experience problems. In the table 43 out of 50 patients were considered as TRAINED, therefore success of treatment can be

estimated as 86%. Another important finding is that most of them transmit the new way of eating and lifestyle to their family. This is considered by a good practitioner, who aspires to contribute to a healthier society, a great success. 16 patients out of the 50, estimated as the 32% of them manage to convince their family to follow the therapeutic principles of Nutritional Medicine. These patients can be considered as having a higher possibility to be permanently free of their health problems at some point of their lives, because of the support they will find from their family.

5.3.2. Finding Six

The research confirmed evidence in literature which had demonstrated that therapeutic nutritional interventions do not form part of classical medical education and training and most Medical Practitioners do not provide these, as part of their routine medical practice. A paradox that emerges with this finding relates to evidence in literature, also confirmed by this research, according to which it is a general belief that nutritional interventions fall within the realm of responsibility of the medical community

For evidence in literature on Finding SIX please see

In THIS REPORT,
Chapter 2.4. ***CONTEMPORARY HEALTHCARE-A Critical appraisal***

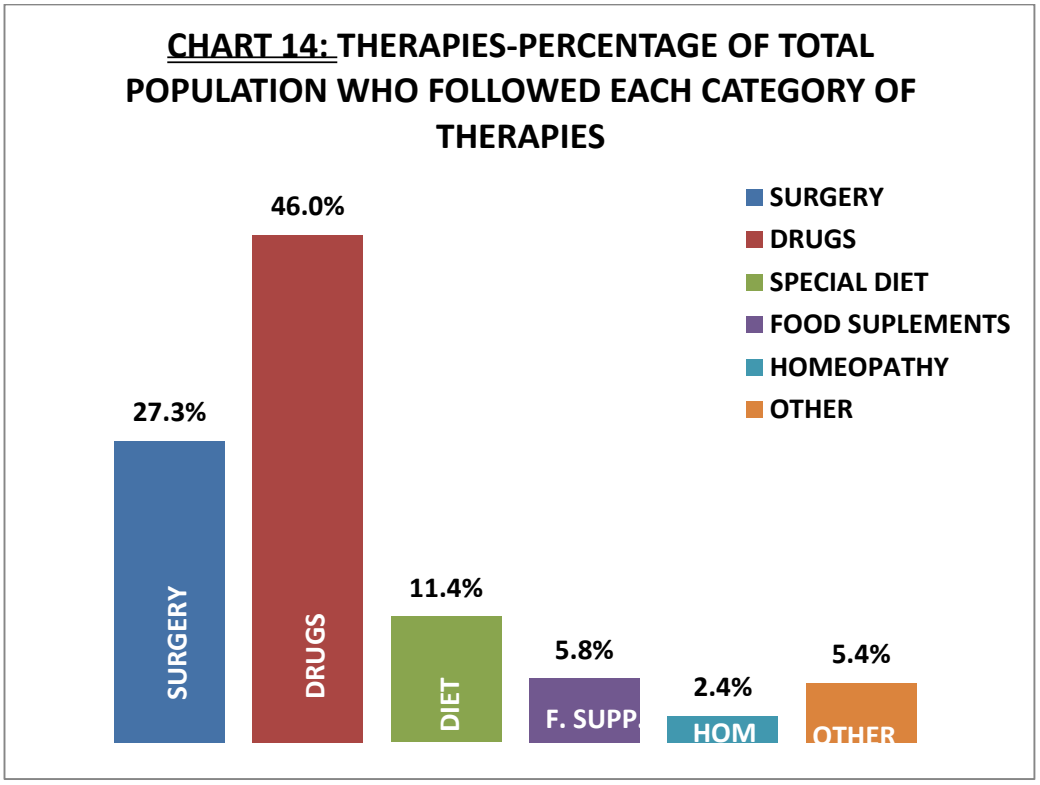
In the EVIDENCE OF ACHIEVEMENT
Part III: CONTEMPORARY HEALTHCARE-A CRITIQUE
Chapter V: ***Low application of therapeutic evidence-based nutritional interventions***

Part VI: NUTRITIONAL MEDICAL PRACTICE IN THE NEW PARADIGM
Chapter V: ***The rationale for nutritional supplementation:***
Evaluating nutrient deficiencies

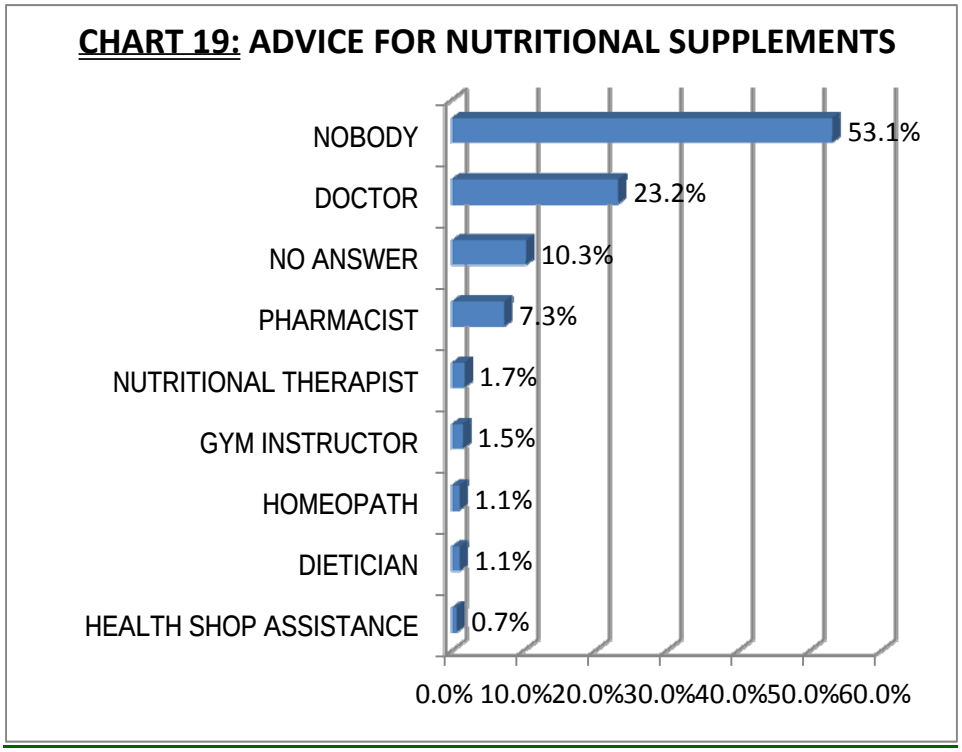
The review of literature has demonstrated that medical schools of the United States and Europe, where Cypriot doctors mainly study, do not currently offer adequate education and training in therapeutic, evidence-based, nutritional interventions. As a result, medical practitioners are, in general, not adequately equipped to provide scientific nutritional advice to their patients. In addition, it was demonstrated that these interventions are not part of routine medical practice. The Interviews with key actors confirmed that nutritional interventions are not part of routine medical practice in Cyprus. In particular, during both interviews with different Officials of the Health

Insurance Organisation it was clearly stated that there is no provision in the National Health Insurance Scheme to cover dietary therapeutic means, such as nutritional supplements, as they are not currently prescribed by doctors in Cyprus, and they are not generally considered as part of contemporary medical practice. This was also confirmed by the representative of the Doctors' Association who stated that, nutritional supplements are, in general, not part of routine medical practice, because not so many pathological conditions require their use, and doctors do not necessarily need to have knowledge on these issues as they may not have so many patients who will need them.

The analysis of the results from the Survey demonstrated that only 11.4% of Cypriots followed a special therapeutic diet and 5.8% used nutritional supplements to treat a health problem (**Chart 14:Therapies-Percentage of total population who followed each category of therapies)**



It is not clear, though, whether these treatments were prescribed by a doctor. What was clearly deduced from the statistical analysis was that the majority of the population state that nobody advices them for the nutritional supplements they use, while only 23.2% of them get advice from a doctor and 1.7% from a nutritional therapist (**Chart 19: Advice for nutritional supplements).**



Furthermore, the Survey (**Chart 20: Nutritional Supplement Use)** does not support evidence for a large application of nutritional therapeutic interventions within the Cypriot population. Chart 20 suggests that the most frequently used supplements are Multivitamins which are not usually part of routine Nutritional medicine practice (although they might be used in specific cases). As a rule, the nutritional practitioner designs tailor-made prescriptions for each individual patient, using mainly single nutrients (vitamins, minerals, herbs etc), in various therapeutic quantities, according to the particular problems of each patient. Multivitamins usually contain *'a little-bit-of-everything'* and are suitable for most individuals but do not normally contain the levels of nutrients needed for therapeutic interventions. Iron is the

second most used supplement followed by Calcium which appears to be the third most frequently used supplement (**Chart 20: Nutritional Supplement Use)**. Interestingly, doctors appear to be responsible for the use of more than three quarters (76.7%) of this mineral by the Cypriot population (**Chart 21: Calcium use and professional advice).**

CHART 20: NUTRITIONAL SUPPLEMENT USE

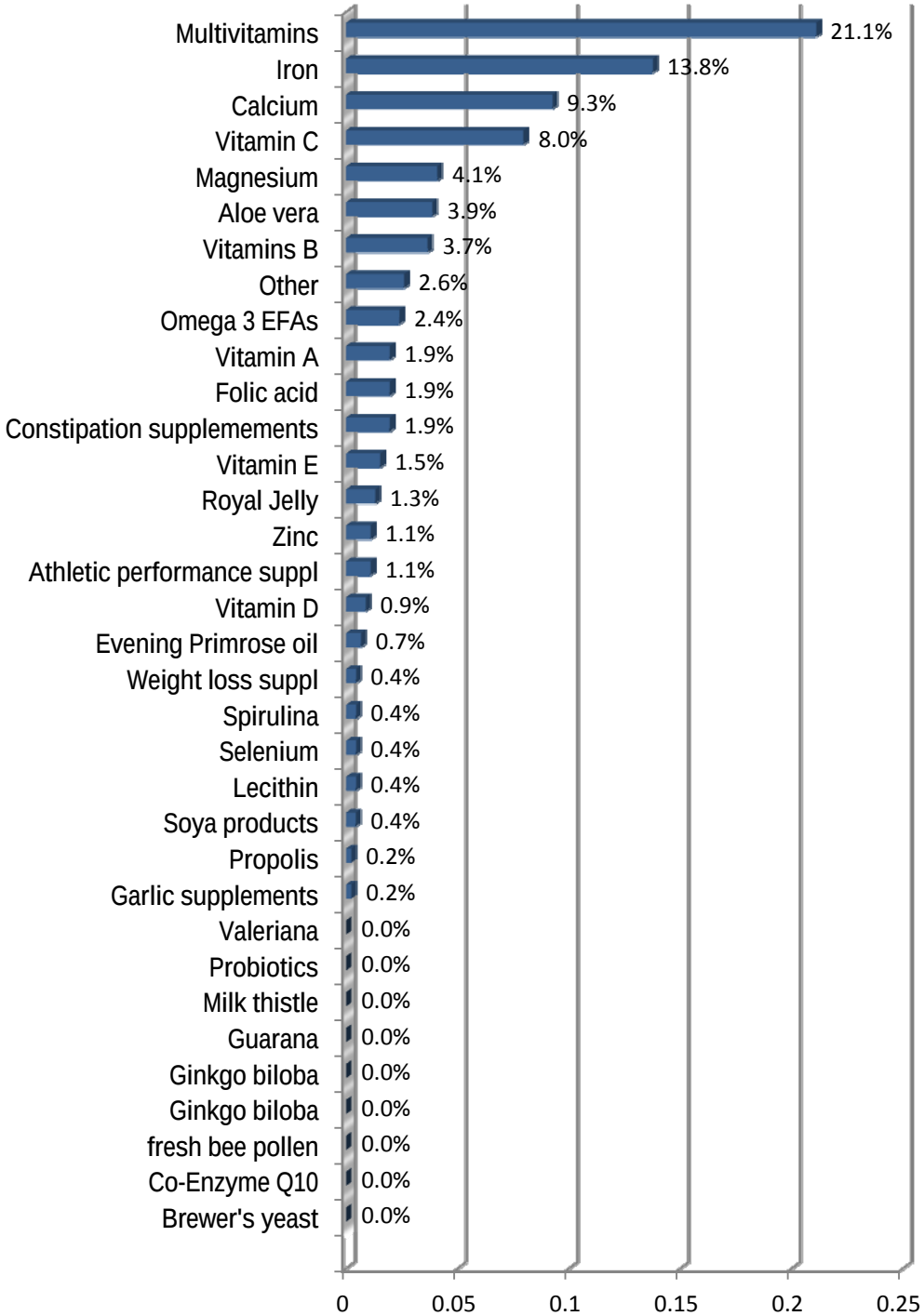
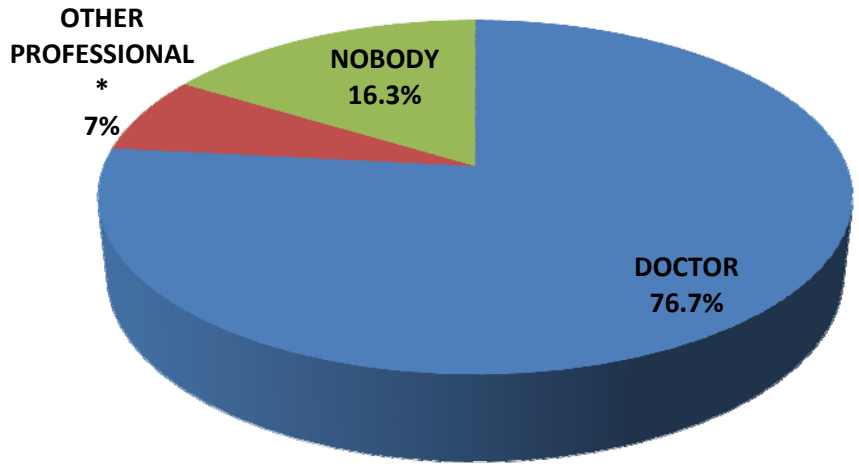


CHART 21: CALCIUM USE AND PROFESSIONAL ADVICE



*Nutritional therapist, dietician, homoepath, pharmacist, gym trainer, heatlh shop assistant

It is worth to note here that Calcium, although important in Nutritional Medicine treatments, it is always used with care, always in small quantities, on the basis of its particular function in metabolic processes, such as its controlling effect on the intensity of therapy. Most of the time it is used in combination with several other nutrients, including zinc, vitamin D, boron and others, but particularly with adequate magnesium, often in quantities twice as those of calcium, to facilitate its absorption and prevent its deposition in the wrong tissues of the body as calcifications (*Literature*). (*Worth noting is that Magnesium use is generally much lower than Calcium as shown in Chart 20*). A volume of evidence in literature demonstrates the adverse, often fatal, effects of calcium in the body, such as antagonism to both heme and nonheme iron, arterial calcification, nephrolithiasis, and brain lesions, and the need to be always carefully prescribed, only when needed, and always with accompanying nutrients, particularly magnesium. And, of course, after restoring the body's calcium handling capacity, to avoid calcium stored in the wrong tissues (arteries, kidneys etc). This problem is a frequently appearing metabolic imbalance and it is often successfully addressed by Nutritional Medicine practice.

Abovementioned evidence clearly demonstrates the need for more profound education and training in the area of prescribing nutraceuticals, as their action is completely different from medicinal drugs, working synergistically and in different ways, under different conditions, in different individuals. From my experience as a nutritional medicine therapist, patients are often overloaded with calcium to prevent or treat osteoporosis, often with the combination of vitamin D. A closer look at **Appendix 3: Medical prescriptions for Specific Health Problems** confirms this. In particular, patients P3, P6, and P45, used Calcium and Vitamin D for osteoporosis/osteopenia, although they present chronic serious gastrointestinal problems, which might be among the causes for inadequate calcium absorption. This problem was not adequately addressed, since the prescribed proton pump inhibitors and antacids promote *hypochlorhydria* (gastric pH above 3.5) in the gastrointestinal system, thereby further inhibiting proper absorption on minerals (Evidence of Achievement). Worth noting is that patient P26, also used calcium for osteoporosis, in spite of the fact that she was already diagnosed with calcifications and ulcerative colitis, verifying the case for calcium malabsorption and/or mishandling, rather than lack of calcium in the body.

Further evidence from my Clinical Practice, demonstrates the low number of nutritional prescriptions (14%) by doctors (**Table 6: Use on Non-Conventional therapies before nutritional treatment)**

TABLE 6: USE OF NON CONVENTIONAL THERAPIES BEFORE NUTRITIONAL TREATMENT
(Percentage of 50 randomly selected cases from clinical practice)

TYPE OF NON-CONVENTIONAL THERAPY	percentage
Used supplements for a specific health problem	68%
Used supplements without advice	54%
Used supplements (mainly iron, calcium and multivitamins) with doctor's advice	14%
Had other Non Conventional medicine treatments	24%

and in **Table 9: Nutritional and Drug Prescriptions by Doctors,** demonstrates that these are mainly for Iron, Calcium, and Multivitamins,

TABLE 9: NUTRITIONAL AND DRUG PRESCRIPTIONS BY DOCTORS
(50 randomly selected cases from Clinical Practice)

TYPE OF ADVICE	Number of patients	Percentage of total number of patients
No nutritional advice	**43**	**86%**
◗ **With drug prescription**	37	74%
◗ **Without drug prescription**	6	12%
Calcium supplements	**2**	**4%**
◗ **With drug prescription**	2	4%
◗ **Without drug prescription**	0	0%
Iron supplements	**2**	**4%**
◗ **With drug prescription**	2	4%
◗ **Without drug prescription**	0	0%
Calcium and Iron supplements	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%
Multivitamins	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%
Avoidance of foods	**1**	**2%**
◗ **With drug prescription**	1	2%
◗ **Without drug prescription**	0	0%

Notwithstanding the above, it appears in literature, and confirmed by the research in Cyprus that there is a general belief amongst a significant proportion of the medical community (but not all), and some key actors, that therapeutic nutritional interventions fall within the scope of practice of medical doctors. In the Interviews, replying to the question: '*Who do you think is the right professional to provide nutritional therapeutic diets including nutritional supplements?*' Official One of the Ministry of Health strongly supported the Cypriot doctors' competency for therapeutic nutritional interventions, adding that any gaps (if any) in this area of practice can be adequately filled by the Clinical Dieticians. Oppositely, Official Two of the Ministry of Health, identified a 'knowledge deficit' in the area of applying nutritional therapeutic interventions, claiming that these need special education and training which is not currently provided, neither by classical medical education nor by Dietetics. The representative of the Doctors' Association also supported the view that nutritional interventions should be applied by specialists in the field, adding, however, that all these should be prescribed always by doctors. Most key actors, expressed the view that specialists in the field are needed for therapeutic nutritional interventions, however some of them believed that some doctors also have adequate knowledge for nutritional advice, or that they should have additional education in order to offer nutritional advice, and others that they don't consider it proper to deprive doctors from the right to prescribe nutritional supplements. The opinion that in addition to specialists in the field, also doctors and pharmacists have the knowledge to prescribe supplements if they devote some time to familiarise with them, was expressed.

5.4. OBJECTIVE FOUR-REGULATION

To investigate whether and how the profession of Nutritional Medicine (or, as otherwise termed, Nutritional Therapy) is currently regulated in other European countries and to evaluate the extent to which it could be accepted for inclusion in the National Health System of Cyprus and, if not, the reasons for this.

5.4.1. Finding Seven

Adequate evidence demonstrates that regulation for the practice of Nutritional Medicine is already promoted in the area of European Union. The Example of United Kingdom was examined

AN EXAMPLE FROM EUROPE-THE UNITED KINGDOM

Modernisation of the UK National Health System

In an attempt to demonstrate what happens in other European countries, the example on United Kingdom's process of modernisation is provided below, focussing on the regulation in the area of Nutritional Medicine, (*DH 2010i*)

The National Health System of the United Kingdom is under a process of modernisation by the Department of Health and as expected there appears to be some opposition from the unions. However, placing the benefit of the patient at the heart of all actions, the government seems determined to proceed. The following statements, presented by the media centre of the Department of Health, belong to Health Minister Simon Burns during an interview with Dr Mark Porter of the British Medical Association:

> '*We are modernising the NHS so we can offer patients high quality care and improved health outcomes. Our cancer survival rates are amongst the worst in Europe so doing nothing is not an option.' [...] 'We want patients to choose the best care to suit them, but that does not mean a compromise in quality. Only those who meet rigorous quality standards will be able to provide services.'* (*DH 2011i*)

In a March 2011 press release of the Department of Health, Health Secretary Andrew Lansley is reported stating that...

> '*the NHS can't afford to stand still if it is going to cope with the increasing number of people with one or more long term conditions-set to increase dramatically by 252 percent by 2050'. [...] 'The 15 million people with long term conditions want a different approach- they do not want to spend time in hospital and they want more say in the care they get and the way it is delivered*' (*DH, 2011ii*)

Regulating Nutritional Therapists

Focussing on the developments in the area of Nutritional Medicine, Nutritional Therapists are currently coming under regulation by the Complementary and Natural Healthcare Council (CNHC) which is a voluntary regulatory body sponsored and fully supported by the Department of Health, (*NHS 2011*). On its official website, the Department of Health calls medical practitioners to recommend patients for complementary therapies to those practitioners registered with the CNHC, as a 'government sponsored, voluntary body for complementary healthcare practitioners'.

> *'GPs are asked to recommend patients who are seeking complementary therapies to consult with practitioners who are registered with the Complementary & Natural Healthcare Council* (*CNHC*), *where it registers the professional discipline concerned. The CNHC is a Government-sponsored, voluntary registration body for complementary healthcare practitioners. Its key function is to provide access to a list of practitioners that have been assessed as meeting national standards of competence and practice. Registration is currently voluntary and not all complementary healthcare practitioners from these disciplines are registered. This does not necessarily mean that they are not qualified, but it does mean that the CNHC knows nothing about their qualifications or experience. The CNHC will open the register to more disciplines over the next year.'* (*DH 2010i*)

The following link is also provided below the above statement for fast access to the CNHC registry:

Visit the CNHC website for a list of registered therapies and practitioners

The Department of Health provided the CNHC with full support from the first day of its establishment, with the following guidance to the NHS chief executives, published in its online weekly Bulletin The Week, issue 79 (*16-22 January 2009*), under the Policy News:

> *New voluntary register for complementary healthcare (Gateway reference number: 11211)*
> *The Complementary and Natural Healthcare Council (CNHC) opened its new register on 19 January 2009. For the first time in the UK, members of the public who use a range of complementary healthcare services will be able to check that their practitioner is registered with an independent and robust voluntary registration body.*
> *Link: www.cnhc.org.uk*
> Action*: NHS chief executives should be aware of this new body and, when commissioning complementary healthcare services, to consider using those registered with the CNHC,* (*DH 2010ii*)

Similarly, the British Medical Association (BMA) expressed its support to the regulation of Nutritional Therapists with CNHC and has already passed a relevant policy during the 2008 BMA Annual Representatives Meeting (*Crispin et al., 2010, ref. No 4, p.377*). The following extract from the Journal of Medical Ethics (*member of the British Medical Journals Group*) demonstrates the views of the British Medical Association

> '*The British Medical Association has argued that all complementary therapies should be regulated to the same standards expected of the medical profession and should be subject to an independent regulatory body. It has also called for a ban on the use of NHS resources to fund unregulated therapies who associations are not affiliated to the CNHC.'*
> (*Crispin et al., 2010, p.375*)

The CNHC demands from its Registered Practitioners compliance to the following:

1. A Code of Conduct, Performance and Ethics for Registrants, which demands the duty of the Practitioner to the health and wellbeing of those using their services, (*CNHC 2008*).
2. The CNH8 National Occupational Standard: Provide Nutritional Therapy to Clients, linked with *Dimension HWB7 Interventions and treatments,* within the National Health System *Knowledge and Skills Framework* of October 2004, developed by the Skills for Health[1],(*CNH8 2010*).
3. The CNH9 National Occupational Standard: Prescribe Nutraceuticals to clients, linked with *Dimension HWB7 Interventions and treatments,* within the National Health System *Knowledge and Skills Framework* of October 2004, developed by the Skills for Health[2], (*CNH9 2010*)

The British Association for Applied Nutrition and Nutritional Therapy (BANT) strongly advises that all Nutritional Therapy Practitioners must ensure that their practice is guided by these Standards, (*BANT 2011*). Full compliance with the National Occupational Standards of CNHC is also a prerequisite for BANT members to be able to register with the Complementary and Natural Health Council (CNHC)

[1] **SKILLS FOR HEALTH**: http://www.skillsforhealth.org.uk/about-us.aspx is one of the 25 sector skills councils in the United Kingdom)responsible for the health sector), which operate under the UK Commission for Employment and Skills)UKCES) which is responsible for skills in all sectors

[2] **SKILLS FOR HEALTH**: http://www.skillsforhealth.org.uk/about-us.aspx is one of the 25 sector skills councils in the United Kingdom)responsible for the health sector), which operate under the UK Commission for Employment and Skills)UKCES) which is responsible for skills in all sectors

THE CODE OF CONDUCT, PERFORMANCE AND ETHICS-AN OVERVIEW

General Principles

- The care of your patient must be your first concern
- You must provide a high standard of care at all times
- Patients must be treated with respect, as individuals
- Your professional knowledge must be kept up to date
- You must act lawfully in your professional and personal practice
- You are personally accountable for your professional activity

Duties of registrant practitioners

- Maintaining high standards of conduct
- Observing high standards of performance
- Maintaining high ethical standards

Main responsibilities of registrant practitioners

- acting always in the best interest of the patients, clients and users;
- respecting the confidentiality of their patients, clients and users;
- maintaining high standards of personal conduct;
- providing, on request, any relevant information about their conduct, competence or health;
- ensuring that their knowledge, skills and performance are of a high quality, up to date, and relevant to their field(s) of practice;
- acting within the limits of their knowledge, skills and experience and, if needed, refer to another Registrant practitioner
- maintaining appropriate and effective communications with patients, clients, users, carers and other registrants and professionals
- effectively supervising tasks they have delegated
- getting informed consent to give treatment (except in an emergency)
- keeping accurate patient, client and user records
- being aware of and managing effectively and safely the risks of infection
- limiting their work or stopping practising if their performance or judgement is affected by their physical, emotional or mental health
- Carrying out their duties in a professional and ethical way
- Behaving with integrity and honesty
- Following CNHC guidelines in relation to advertising their services
- Avoid being involved in any behaviour or activity that is likely to damage their profession's reputation or undermine public

THE NATIONAL OCCUPATIONAL STANDARD CNH8
Providing Nutritional Therapy to Clients

National Occupational Standard CNH8: Provide Nutritional Therapy to clients

Overview

This standard is about providing Nutritional Therapy to clients. Nutritional Therapy Practitioners work in preventive medicine, the optimization of physical and mental health, and in the treatment of chronic diseases, often with complex multiple causes. Nutritional Therapy encompasses personalized dietary therapy and nutraceutical prescription, and life style advice within a functional medicine framework.

The scope of practice for Nutritional Therapy excludes artificial (parenteral/enteral) feeding and dietary management of acute life threatening states, e.g. intestinal or renal failure, and injury trauma.

Users of this standard will need to ensure that practice reflects up to date information and policies

Reproduced from Skills for Health 2010i,

National Occupational Standard CNH8: Provide Nutritional Therapy to clients

Knowledge and Understanding

You need to know and understand:

1. the historical development of the therapy and the profession
2. the concepts underpinning functional systems biology/medicine, and patient centred approaches
3. the concept of Nutritional Therapy as a process driven modality
4. the concepts underpinning CAM, and integrative and orthodox medicine
5. roles that evidence-based and traditional research play in informing clinical decision-making
6. how to use questionnaires and diaries to optimise gathering of information
7. methods for obtaining and recording anthropometric measurements
8. methods for conducting and recording observations of health status
9. how to select, when appropriate, biochemical, nutritional and functional tests
10. how to use support materials, resources and information to increase compliance
11. how to communicate with other health professionals to provide a client-centred integrated approach
12. how to use the client's story as a key tool for integrating diagnosis, signs and symptoms, and evidence of clinical imbalances into a comprehensive approach to improve both the patient's environmental inputs and physiological function
13. how to apply a functional systems biology/medicine, and patient centred approach
14. how to use prognosis to rationalize strategies for prioritisation, and timeline planning
15. how to identify situations in which it may be appropriate to delay implementing all or part of a treatment plan
16. ways in which individual safety may be compromised by inappropriate treatment and how to minimise such risks
17. how to interpret and evaluate data from observations and laboratory tests

18. how to use diverse sources of information to provide a personalised plan
19. how to synthesize new information and modify the treatment plan over successive consultations
20. issues in translating government guidelines, epidemiological, and other research findings to the construction of individualized interventions
21. models of reflection and how these are applied to practice
22. strategies for managing potential dissonance between expected and actual treatment outcomes for self and client
23. the relationship the client has with food, food groups and dietary models
24. how different cultures describe effects of food on health
25. how to conduct quantitative and qualitative analyses of food intake
26. how to balance quality, quantity, variety and therapeutic effect to achieve negotiated goals, redress deficiency, modulate/optimize functional status or for palliation
27. uses of transitional, alternative and functional foods, recipes and menu plans to increase compliance
28. how to a construct ethical and environmentally sensitive dietary advice
29. how to identify potential food – drug and nutraceutical interactions
30. risks - benefits of foods or dietary models, historical and current, used to modulate antecedence, triggers and mediators
31. the approach of orthodox dietetics in prevention and treatment, including enteral and parenteral nutrition, to facilitate collaboration and identify professional boundaries
32. the nature and extent of changes to performance or symptoms expected
33. how to distinguish perceived negative effects that may be experienced by individuals from other causes of change
34. how changes are explained by nutritional therapy principles
35. how to enable individuals to recognise progress
36. the purpose of supporting the individual to consider the implications of any changes which are made to the treatment
37. the use of audit to monitor all aspects of a programme
38. the sources, classification, biochemical structures and related functions, interactions of and therapeutic considerations of macronutrients, micronutrients, secondary plant metabolites and other non-nutritive substances
39. factors affecting individual's requirements: bioavailability, absorption, transport, metabolism and excretion, endogenous and exogenous xenobiotics, impact of genetics and disease
40. the integration, coordination, and regulation of metabolic pathways by hormones and bio-molecules, nutrients and nutraceuticals
41. interaction of nutrients, non-nutritive substances and nutraceuticals with the human genome including epigenetic effects
42. traditional and novel uses of nutrients and non-nutritive substances
43. how requirements and reference intakes through the life stages are determined
44. the chemical composition of food and its effects on health and disease
45. use of food composition tables and nutritional databases
46. effects of food adulterants and contaminants on health
47. effects of production, processing and preparation on food quality, health and the environment
48. nutrient, phytonutrient content of foods and their effects on bioavailability
49. the diversity of adverse reactions to foods and functional foods
50. how regulations relating to labelling and health claims impact on practice

51. the functioning and web-like interaction between tissues and organs at the, cellular and systemic levels
52. the core clinical imbalances that underlie various disease conditions
53. the clinical signs and symptoms generated by the body's response to stress, poor nutrition, insult or injury through exposure to endogenous and exogenous toxins, allergens, infectious agents, parasites, other environmental factors, genetic predisposition, emotional and psychosocial factors
54. common biomedical terminology used in pathology
55. the aetiology and pathology of common diseases and their clinical features
56. the impact of microbiota on health
57. how to ascertain the sensitivity, specificity and validity of diagnostic tests
58. selection, use and evaluation of tests of biochemistry, pathology, microbiology genetic information, and functionality in diagnosis and monitoring
59. differential diagnoses of common conditions and diseases
60. boundaries to practice including:
    1. which conditions should be referred (the red flag list)
    2. which signs and symptoms, and test results warrant further investigation
    3. high-penetrance single-gene disorders

Reproduced from Skills for Health 2010i

National Occupational Standard CNH8: Provide Nutritional Therapy to clients

Performance Criteria

You must be able to do the following:

1. conduct a nutritional and overall health assessment, and plan the therapy
2. ensure that the environment meets the client's needs
3. ensure that any equipment and materials are ready for use
4. provide clear and accurate advice to the client in relation to nutritional therapy
5. select, implement and interpret appropriate assessments and tests for the client and to inform decision-making
6. ensure that when referring to or collaborating with other healthcare providers communication is accurate and supports the needs of the client
7. implement nutritional therapy safely and in accordance with professional codes of practice, legal and organisational requirements
8. make appropriate adjustments to the nutritional therapy to meet any changing needs
9. check the client's well-being throughout and give reassurance where needed
10. educate the client to implement nutritional therapy, and any relevant aftercare and self-care
11. critically evaluate the outcomes of the nutritional therapy programme to inform future plans and actions
12. critically appraise areas for self-development within the context of continuing professional development planning

Reproduced from Skills for Health 2010i

THE NATIONAL OCCUPATIONAL STANDARD CNH9
Prescribing Nutraceuticals to Clients

National Occupational Standard CNH9: Prescribe nutraceuticals to clients

Overview

This standard is about the ethical prescribing of nutraceuticals to clients. The Nutritional Therapy Practitioner links theory to practice through the critical appraisal of a diversity of information sources.
Users of this standard will need to ensure that practice reflects up to date information and policies

Reproduced from Skills for Health 2010ii

National Occupational Standard CNH9: Prescribing Nutraceuticals to clients

Knowledge and Understanding

You will need to know and understand:

1. principles of pharmacokinetics, pharmacodynamics and hormesis
2. general mechanisms of action, possible side effects including induced nutrient deficiencies, and contra-indications of commonly used drugs
3. factors affecting variability of responses to drugs and nutraceuticals including genetic influence, age, gender, health status, diet and lifestyle
4. possible consequences of drug/food/nutraceutical/phytonutrient/herbal medicine/xenobiotic interactions
5. how effects and side effects of drugs may affect diagnosis and prognosis
6. how to use standard reference sources for information about named drugs
7. how to appraise models of research and research findings used to trial drugs and drugs with diet and or nutraceuticals and translate to practice
8. models of prescribing and how to apply in practice
9. how form, formulation, and standardization affect bioavailability, synergy and antagonism, pharmacokinetics and pharmacodynamics, toxicity and safety
10. how to determine dosage and timing of intake to rectify clinical or subclinical deficiency, and modulate antecedence, triggers and mediators of systems dysfunction
11. prophylactic and palliative uses of nutraceuticals
12. factors to consider when selecting nutraceuticals and how these may affect individuals' response to such nutraceuticals including disability, religion, moral stance, socioeconomics, lifestyle, motivation and potential compliance
13. risk-benefit factors to consider when deciding on nutraceuticals, and how these various factors may affect individuals' reactions to such nutraceuticals

14. how to adjust a prescription in relation to dietary and lifestyle modification, test results, past, current and future medication, and other interventions and treatments
15. appropriate use of terminology and abbreviations when recording findings and communicating with other health professionals
16. issues in translating government guidelines, research findings, traditional texts and promotional materials to the construction of individualized prescriptions
17. how to prescribe ethically, cost effectively and with regard to the environment
18. relevant governmental and professional regulations
19. how timing of intake, storage and handling may affect the safety, integrity and effect of nutraceuticals
20. the nature and extent of changes to performance or symptoms expected
21. perceived negative effects that may be experienced by individuals and how to distinguish these from other causes of change and advise on appropriate action
22. how to report adverse events
23. how changes are explained by nutritional therapy principles and philosophy

Reproduced from Skills for Health 2010ii

National Occupational Standard CNH9: Prescribing Nutraceuticals to clients
Performance Criteria

You must be able to do the following:

1. select a prescribing methodology which is appropriate for the client based on the assessment
2. identify nutraceuticals in accordance with the assessment and prescribing methodology select the nutraceuticals appropriate for the client and the stage of their treatment
3. prescribe nutraceuticals that are most likely to give optimum benefit to the client
4. dispense nutraceuticals to the client safely, or arrange for safe dispensing to take place
5. explain the nutraceuticals and possible responses to the client
6. encourage the client to monitor their condition and response to the nutraceuticals, and note any changes in their health and well-being
7. communicate with other health care professionals as is appropriate
8. evaluate compliance with and outcomes of the nutraceutical prescription in the context of dietary therapy and lifestyle advice to inform future plans and actions
9. complete and maintain records in accordance with professional and legal requirements

Reproduced from Skills for Health 2010ii

5.4.2. Finding Eight

Adequate evidence was found to demonstrate that Cyprus political decision regarding the health sector is impeded due to the fact that key actors are inadequately informed about the very existence of Nutritional Medicine; have misconceptions about who and how provides nutritional therapy; and is strongly opposed by some of the unions.

This research has identified a volume of evidence for the effectiveness of Nutritional Medicine, particularly in the area of prevention and treatment of chronic disease. This fact has been acknowledged and promoted by the worldwide academic community and it is gradually gaining the respect of the medical community, as demonstrated in the example of the United Kingdom (***Chapter 5.4.1. Finding Seven***). However, the largest proportion of the power to design and implement transformative policies rests with the politicians who, apart from their political power, they need the *sciential potential est*[1], essential to support decision-making. The experiential learning gained from a number of professional and political activities in which I was involved during the last three years of duration of this project (***Chapter 6. Evaluation/Critical Commentary***), together with the insights extracted from the transcription and analysis of the interviews with several Cypriot political actors, demonstrated that there exists a significant gap of knowledge on the role of Nutrition as a scientific, evidence-based therapeutic agent, among those having the power to decide. This fact raises reasonable concerns as to why and by whom, this knowledge was prevented from reaching the decision makers. This concern was also expressed by some of the interviewees, (Some evidence-based answers to this concern can be found in the ***EVIDENCE OF ACHIEVEMENT, Part VII: Nutritional research-a critique)*** This gap appears to be one of the major impediments to transformation and change in this area of the Health Sector of Cyprus.

[1] Knowledge is power

As presented in findings above almost all of the key actors acknowledged a number of facts such as: the rising incidence of chronic disease; the need for more patient-centred approaches; the importance of diet and lifestyle in health and disease; and the **need for modernisation and transformation** of the Cypriot Health Sector to conform to European new policies and directives, following the example of other European countries. The belief that the present National System puts very low emphasis on nutritional means for prevention and treatment of disease was stressed by almost all. Key actors criticised the fact that the Science of Nutrition is not currently used for evidence-based therapeutic interventions, but mainly for advices on weight loss, reduction of blood pressure, cholesterol, or improvement of appearance. The need for inclusion of some non-conventional approaches into the National Health System was also acknowledged by all, including the representative of the Cyprus Medical Association.

However, Nutritional Medicine as a therapeutic modality was largely unknown by almost all key actors. The representative of the Doctors' Association, in particular, stated emphatically that the word 'Medicine' denotes only Biomedicine and any modality not having the same educational background is not 'medicine', it is 'philosophy'. A similar view was expressed by the Member of the Health Committee of the House of Representatives, who stated that the word 'medicine' can only be used by those who studied Biomedicine. The representative of the Doctors' Association expressed his belief that doctors will react to the inclusion of Nutritional Medicine in the National Health System explaining that 'we are not allowed to do this because it is against the regulations of the European Union'. In the question if he personally would vote for it, he replied 'Of course not.' The possibility of opposition of the current medical establishment to the inclusion of Nutritional Medicine into the National Health System was evident not only from the interview with the representative of the Doctors' Association, who was openly against, but it was also a fear expressed in the replies of almost all of the other interviewees.

Worth noting is that, as already discussed in ***Chapter 5.3.2. Finding Six,*** almost all interviewees agreed that experts in the particular field are needed for this, although for most of them it was a taken-for-granted fact that a good doctor should be able to apply nutritional interventions. In the question asking whether they would vote for the inclusion of Nutritional Medicine in the National Health System, most positive replies were accompanied by conditions, such as 'if Nutritional Medicine is substantiated by adequate scientific evidence'; 'if this decision is taken first at the European Union level' and 'if also doctors were allowed to practice Nutritional Therapy'.

Furthermore, two major misconceptions were identified during the interviews with political leaders: the first was that Medical Doctors are adequately educated and trained for effectively applying nutritional therapy, (*confirming evidence in literature*) and the second that Clinical Dieticians are actually filling this gap in nutritional therapy in Cyprus. The first misconception was adequately elaborated on, in ***Chapter 5.3.2. Finding Six***. The second misconception is that Clinical Dieticians (*who are currently the only regulated by law professionals working in clinical settings in Cyprus*) are able to fill the gap in Nutritional therapy. An account of the definition and duties of Dieticians, which does not appear to support evidence-based nutritional therapy, is provided below, in an effort to correct this misconception. At first, a look at the definition of the Clinical Dietician as provided by the European Federation of the Associations of Dieticians (EFAD) (*in which Cypriot Dieticians are members*):

> *Clinical Dietician is 'a dietician who has responsibility for planning, education, supervision and evaluation of a clinically devised eating plan to restore the client/patient to functional nutritional health. Clinical dieticians can work in primary care as well as in institutions'.*
> (EFAD2011)

In addition the description of the Dietician and the Clinical Dietician as provided by the Cyprus Dietetic Association:

> *The Dietician*

He is recognized as being responsible for a person's nutrition. He helps individuals as well as groups of people to choose the right foodstuffs (both in terms of quality and quantity), by preparing the appropriate diet with the aim of providing the human body with the appropriate nutritional substances in order to ensure a healthy living and prevent and confront certain nutrition-related conditions for healthy people and specific health conditions. He may also become involved in research or training or legislation and politics with regard to foodstuffs and nutrition. He is considered member of paramedical professions or other medical services. His direction can be in community and/or administrative dietetics.

The Clinical Dietician

Apart from his/her duties as Dietician, on the basis of specific diagnosis, helps individuals with health problems that relate to clinical dietetics to improve their condition, designing for them the suitable menu and the suitable nutritional/dietary therapeutic treatment acting as part of the Team of the Professionals for Health. S/he is considered as a member of the paramedical professions or other medical services. S/he can also conduct research or involve in education or law and policy in relation to foods and nutrition. S/he can also specialise in communal, administrative, clinical dietetics (*Cyprus Dietetic Association 2009*)

Searching for a more detailed description to understand the exact duties of a Clinical Dietician, a 'Toolkit for Dieticians' is provided by the British Dietetic Association (*in which Cypriot Dieticians are also members*) (*The British Dietetic Association 2011*). The 'toolkit' provides guidance to Clinical Dieticians on 'Delivering Nutritional Care through Food and Beverage services' to hospitalised patients. This document was commissioned by the British Dietetic Association Professional Development Committee and produced by the Food Counts Specialist Group of the British Dietetic Association. Reading through the 'toolkit', it appears that Dieticians do an important job, on the basis of their training and education, in designing menus for hospitalised patients or other sick people who are usually monitored by a medical doctor. The menus are thoroughly and scientifically designed, evaluating the bulk ingredients of each food, such as energy, protein, carbohydrate, sugars, fats, saturates, trans fats, fibre, and sodium, as well as their micronutrient content, such as zinc, vitamin C, Vitamin D, folate, and omega-3 fatty acids. These are calculated on

the basis of food tables provided by renowned authors as is McCance & Widdowson and other official guidelines, as the FSA guidance on analysis of macronutrients in recipes. However, as it has been shown in the previous chapters, micronutrient composition is greatly affected by conditions, beyond the scope of medical and dietician practice, such as those related to environmental, agricultural, farming, and manufacturing factors. This fact is in part admitted by McCance and Widdowson in a statement, cited in the same document of the British Dietetic Association as follows:

> *There are two schools of thought about food tables. One tends to regard the figures in them as having the accuracy of atomic weight determinations; the other dismisses them as valueless on the grounds that a foodstuff may be so modified by the soil, the season or its rate of growth that no figure can be a reliable guide to its composition. The truth, of course, lies somewhere between these two points of view"*
>
> *McCance & Widdowson, 1943*
> (*Quoted in the British Dietetic Association 2011: 'Toolkit for Dieticians'*)

Furthermore, this statement was made more than half a century ago when farming and manufacturing practices were still not so invasive using intensive farming, cocktails of chemicals and hormonal injections in animals and vegetables, most of them causing depletion of micronutrients and excess of heavy microminerals and other poisons in most foods (*see evidence in previous chapters*).

In addition, Clinical Dietician practice provides for special food-based interventions with different menus, on the basis of population group-based considerations, such as, the elderly, patients who miss meals, patients who have chewing or swallowing difficulties, or sometimes for individual at-high-risk patients where the 'Red Tray Initiative' is applied (the patient receives their meals on a red tray). A common requirement is that designing special menus for patients with serious diseases, such as those with renal disease, requires a significant proportion of them in the same hospital. Special food- and cooking-based methods are advised for manipulation of specific nutrient

requirements. For example for patients requiring low potassium or low phosphate diets, such as those with renal failure on a dialysis modality, boiling potatoes and vegetables are added to meals to reduce their potassium content. Diabetic patients are given special attention by appropriate delivery of meals in relation to medication and access to in-between meals and bedtime snacks is provided. Hypoglycaemia is treated with high glycaemic index liquids or foods or a top-up snack. In addition a number of special diets modified to suit specific conditions, rather than specific patients, include: restricted fact, restricted fibre, restricted potassium, restricted sodium and restricted phosphate diets. Also vegetarian and vegan diets and allergy and food intolerance diets restricting gluten, milk, egg, nuts etc.

Apparently, Dietician clinical practice is a highly important profession in the wider area of medical practice and their role in multidisciplinary approaches, both for patients with acute as well as with chronic health problems, should be duly respected. However, Clinical Dietetics is not Nutritional Therapy and this fact is highlighted by official and professional bodies, (*NHS 2011i ; BANT 2011*).

The same applies for another profession in the Nutritional area, the **Nutritionists,** who are also not regulated in Cyprus, (*although recently included for regulation in the new Bill tabled before the House of Representatives by the Ministry of Health*). The profession of Nutritionists is also different from Nutritional Therapists. According to the definition included in the new Bill, prepared by the Cyprus Ministry of Health, the Nutritionist can provide general advice only to healthy individuals or groups of healthy individuals related to healthy diet and prevention and are not allowed to design individual diets, (*MOH 2011iv*). A similar definition is provided by the British Association of Nutritional Therapists (*BANT, 2011*)

Nutritional Medicine is mainly about prevention and treatment of chronic health problems through personalised interventions, unique for each

individual patient, as it has been described in detail in the previous chapters. The UK National Health System (NHS) defines Nutritional Therapy as follows:

> *Dietary and nutritional therapies encompass preventive and educational approaches to diet and lifestyle changes, in order to promote and optimise physical and mental health. They encompass personalised dietary therapy and nutraceutical prescription, and lifestyle advice within a functional medicine framework. This represents a nutritional paradigm different to that which underpins current dietetic and public health nutrition practice. Scope of practice normally excludes artificial (parenteral/enteral) feeding and dietary management of acute life-threatening states.* (*NHS 2011*)

...proceeding to more explanatory description:

> *Nutritional therapy/ medicine developed in the twentieth century as a way of treating disease and optimizing health, using nutrition and changes in lifestyle. It involves individual prescriptions for diet and lifestyle, in order to alleviate or prevent ailments and to promote optimal health. These recommendations may include dietary modifications, including the use of exclusion diets, and guidance on methods to support digestion and absorption of nutrients. They may also include the avoidance of ingestion or inhalation of toxins or allergens, detoxification, procedures to promote gastrointestinal health and the appropriate use of supplementary nutrients. Treatment is patient-centred, i.e. based on recognition of the individual's biochemical uniqueness (genetic/epigenetic) and their environment. It considers the web-like connections of physiological factors. Health is seen as vitality, and not just the absence of disease. It incorporates a consideration of nutritional, immunological, endocrine and gastro-intestinal imbalances, inflammatory responses, impaired detoxification and oxidative stress. It is based upon molecular medicine, nutritional biochemistry, preventive medicine and neuroscience.* (*NHS 2011*)

In addition, a description of the Clinical Applications of Nutritional Therapy is provided by the UK NHS:

> *The aim of therapy is to modulate systems dysfunction, as applied for instance to allergies, digestive and bowel disorders, hormonal imbalances, fatigue, depression or anxiety, auto-immune conditions, migraine, skin complaints and degenerative disorders, including arthritis and cardiovascular disease. Parents*

with an overweight child, or a child with learning or behavioural difficulties, may seek to support their child with dietary or nutritional therapy. Nutritional therapy may be complementary to or alternative to mainstream medicine. In some cases, there is no mainstream treatment available, but nutritional treatment may be helpful. (*NHS 2011*)

5.5. OBJECTIVE FIVE-DISSEMINATION

To identify and promote the most effective and influential ways to disseminate the results of this research placing public health at the centre of all actions

5.5.1. At the political level

1. The Interviews provided an excellent form of a first presentation and further promotion of Nutritional Medicine at political level. Almost all key actors had no idea about Nutritional Medicine before the interviews and the majority of them demonstrated a willingness to support its inclusion at the end of the interviews (see: Finding Eight. They also requested a copy of the results of the research.
2. A Letter to the Stakeholders, (the last chapter of this report) will be send to all of them with a copy of the EVIDENCE OF ACHIEVEMENT when it is published. It should be noted that the majority of them still hold their position. However, I have already requested a meeting, and informed the new Officials of the Ministry on Nutritional Medicine, and provided them with all necessary documents with examples of regulation in other European countries. As a consequence, a copy of the results of this research will be send to them as well.
3. A number of activities have also been carried out at the political level, for the promotion of the profession of Nutritional Medicine, including informative letters and recommendations to the President and the Members of the Health Committee of the House of Representatives, and to the officials of the Ministry of Health, (*See Critical Commentary of this Report*). In addition the Leader of the Greens, whom I have adequately informed and convinced about the importance of Nutritional Medicine in a number of meetings we had, is actively involved in its promotion in the House of Representatives, (*Appendix 13*)
4. A presentation at the Health Insurance Organisation to inform the Officials of the Organisation of the results of my research. It will be particularly emphasised that, by including Nutritional Medicine in the

Health Insurance Scheme, benefits will accrue as a result of preventing and/or reducing the rising incidence of chronic disease in Cyprus, rather than treating it with lifelong expensive medical means.

5.5.2. At the academic level

1. The results of the survey will be published in peer reviewed international journals, in cooperation with the University of Nicosia
2. The Evidence of Achievement will be published by the University of Nicosia, and will be presented in the media through a press conference
3. The results of the Survey will be also presented in the media through a press conference, in cooperation with the University of Nicosia

5.5.3. At the public level

1. I have already performed a number of activities towards the promotion of the aims of this project, during the time this research was carried out. These included articles, presentations, publications, and participation in welfare activities. Most of these activities have already proved successful in promoting acquaintance of Nutritional Medicine with the public and acknowledgement of its importance (*as presented in the Critical Commentary of this Report*)
2. More activities are planned for the future, including, publications, presentations, and more active involvement in social activities.

5.5.4. At the professional level

1. Several activities towards promotion of Nutritional Medicine have already been carried out at the professional level, through my active participation in professional associations and projects towards promotion of my professional area (as presented in the Critical Commentary of this Report)
2. Special emphasis will be placed in presenting the results of this project to insurance companies aiming to convince them to cover nutritional therapies for their clients
3. More activities are planned for the future, including, publications, presentations, and more active involvement in social activities.

6. EVALUATION/CRITICAL COMMENTARY

I have chosen to begin my Critical Commentary focussing on that section of the research which investigated the evolution of medicine during the last two and a half millenniums. The impetus to prioritise this area was created from the magnitude of the influence this part of the research had on my perceptions of the world, and on the rest of my research. The value of experiential learning gained from this part of my research lies in the understanding of the strong influence of ideas to the development of all science, including medicine, and of the way by which people develop theories of how the world functions by thinking reflectively on several aspects of their life. Tracing the pathway of evolution of medicine throughout the ages and realising how philosophy dominated all areas of life of people, and how medical thought swayed under the strong influence of different often diametrically opposite views of what reality is, had a determinative effect on my perceptions and beliefs and taught me never to take anything for granted, especially my own views of reality. In addition it helped me to realise the enormous power of knowledge in promoting transformation and change, but also in supporting structures of dominance and legitimating social realities, as perceived by those who possess this power. It was clear to me that to achieve my aims I needed this power of knowledge, but in a form of 'valid' and 'reliable' knowledge, adequately 'scientific' to conform to the western perception of what 'valid' and 'reliable' is. The fact that my professional area was hardly known in Cyprus made the acquisition of this knowledge an imperative to firmly support my arguments as an advocate of Nutritional Medicine. In an effort to enhance the objectivity of my findings, particularly in view of my capacity as an advocate of Nutritional Medicine, I conducted the largest, by far, part of my literature review within publications and studies from researchers and scholars of a biomedical or pharmaceutical background, as well as from official sources.

The interviews with politicians, after being transcribed were subjected to discourse analysis. This proved to be an extremely useful source of information in particular regarding: the way commodities of power are distributed and the roles

people fill in the different areas of the wider health sector[1]; which areas are perceived as problematic; who are the 'problem-owners' and the 'would-be problem solvers'; and who have an interest in the problem situation as it is. This part of the research, representing a phenomenological approach to collection of data, aimed at building up knowledge of the deeper perspectives, opinions, and subjective views of reality of the key actors. However, the highly interactive process of the discussion worked positively the other way as well, with knowledge transmitted also from the interviewee to the interviewees, allowing the reduction to a certain extent of the asymmetry of knowledge, evident from the beginning of the interview, in the specific area of medical action. The discourse analysis of the interviews was a time consuming process; however, it offered valuable data, not readily discernible during a normal conversation process. Particularly evident was the influence of conventional medical thought on their perceptions and, as a consequence, on their decisions on policies and programmes affecting the health sector. A reluctance, for example, to deviate from the established 'legitimate view' of what constitutes a 'healthy status', was evident in the majority of interviewees at the beginning of the conversation. Views such as 'cure of disease', 'disease as a way of life', failing to seriously consider the possibility of complete cure of the patient, rather than life-long management of chronic disease, were often expressed. This was particularly obvious in common chronic health problems, such as diabetes type II, hypertension, migraines and others, where life-long maintenance by suppressing symptoms is considered a cure, and 'a way of life' to which people adapt.

Worth noting is that the bidirectional transmission of knowledge during the course of the interviews provided grounds for new, locally constructed, realities. Conversational analysts attribute specific importance to the *sequence in conversation*, and to *order-produced-in-context*, 'through *sequential organisation'* (*Slembrouck 2006*). According to Slembrouck, 'the major strength of conversational analysis lies in the idea that an important area of interactional meaning is revealed

[1] The term 'wider health sector' is used to denote the activities beyond strictly medical action, eg. politics, policies, culture etc.

in the sequence. Within the same conceptual framework, Goffman (1981)[1] attributes three roles to speakers: The *author* (prepared the text), the *principal* (committed to the beliefs expressed), and the a*nimator* (speaks on behalf of somebody else). The analysis revealed that the majority of the actors entered into the conversational context of the interview adequately prepared as *animator* speakers, expressing pre-given views of reality; however, *changes in footing* (*Goffman 1981*) occurred frequently during the sequence of conversation, with the speakers becoming occasionally *principal speakers* and admitting the weaknesses of the current setting in the provision of healthcare in Cyprus. Goffman's (1981) concern should be noted, at this point, on 'how activities are layered upon primary frameworks', stressing the importance of *frame analysis* in exposing the limitations of an autonomous conception of the interaction order, (*Slembrouck 2006*). In other words, this is what Foucault (1969) defines as *archaeology of knowledge*, according to which the speaker, conforming to conditions existing before he became a speaker, cannot entirely overthrow externally imposed realities. Apparently, the new locally-constructed realities on a number of issues were not entirely autonomous from the interlocutors' *fixed meanings or nodal points,* (*Torfing 1999; Slembrouck 2006*), based on taken-for-granted-assumptions and socially imposed stereotypes, often recognised as *'subjective realities'*. Weedon (*1987, p.151*)[2], claims that *subjective realities* are important structuring principles of societies, social institutions, and modes of thought, (*Alvesson & Karreman 2000*).

Nevertheless, an important outcome of the interviews was the request by all interviewees to receive a copy of the outcome of this research. The interest was particularly strong among the officials of the Health Insurance Organisation who stated that in view of what it was discussed they will also conduct their own research. Apparently, after the interviews Nutritional Medicine had made its *debut* into the perceptions of those having the power to decide about its future. Worth noting is that in the last question requesting an answer to whether they would vote for the inclusion of Nutritional Medicine as a speciality of medicine, all,

[1]Quoted by *Slembrouck* 2006
[2] Quoted by Alvesson & Karreman

except of one, replied positively; without failing to underline, however, that in almost all cases this positive statement was followed by the prerequisite 'if the medical unions agree'. A second important outcome of the interviews, which had a determinant role in my actions that followed, was the identification of two major misconceptions regarding Nutritional Therapy. The first was that Cypriot doctors are adequately educated and trained to provide Nutritional Therapy; and the second, that Clinical Dieticians are Nutritional Therapists. These findings provided the stimulus for several of my following activities aiming to promote my professional area. (*More detailed account of these misconceptions is provided in the Recommendations chapter of this Report and in the Evidence of Achievement*)

A few months after beginning my research and in view of several insights gained from the interviews with politicians, as well as from my literature review, I decided to accept the offer of a group of medical doctors to participate in their newly established medical centre. In the team the following doctors participated, part-time or full-time: Two obstetricians/gynaecologists, a Surgeon/Dermatologist, an Endocrinologist/IVF expert, and a Professor of Genetics working on a project on vaccines for women with recurrent miscarriages. The decision was taken after a series of meetings that lasted a few months and involved discussions, negotiations, and exchange of ideas in search of the form and principles, on which a successful cooperation could be established. One of the doctors who acted on behalf of the medical centre had a basic knowledge about Nutritional Therapy and good recommendations from patients who visited me for a nutritional therapy, and believed that this cooperation could enhance the services provided to the patients of the centre. However, for me it meant much more than a simple cooperation; it was an important experiment as to whether and how a successful cooperation could be established between biomedical and nutritional approaches and what would the limitations and bottlenecks be, of applying a wholistic philosophy within the context of such a highly 'orthodox' setting. It was a challenging endeavour, in which I would observe in practice what I was trying to prove with my research. I moved into the Centre in July 2007 after receiving a formal letter from one of the doctors stating clearly that I would participate as an

equal partner in the decision making process. The important for the aims of the new Medical Centre, role of Nutritional Medicine was emphasised in the letter by one of the partners, who expressed his enthusiasm for the new co-operation. I kept a diary during the four months that this pioneering 'experiment' lasted. I have no doubt that this cooperation it provided me with valuable experiential learning which further contributed to reconsider some of my taken-for-granted assumptions and revalue my techniques of promoting my aims and the priorities of my research. I left the medical centre after four months (*for reasons not related to the cooperation*) to re-establish my own clinic, however, my cooperation continues, particularly with one of the obstetricians/gynaecologists, until today in a slightly different form.

The most important lesson learned from this cooperation is that, successful synergies between healthcare providers need mutual appreciation of the distinctive methods and means used by each modality and respect to the unique characteristics and particularities of each approach. Medicine is not only a science, it is above all an art, as it has been recurrently stressed by medical scholars (*EVIDENCE OF ACHIEVEMENT*), and as an art it involves elements of uncertainty and probability and often requires experience, intuition and judgement. Harold Bursztajn and Robert Hamm, Research Fellows in the Division of Primary Care and Family Medicine of the Harvard Medical School, underline the fact that human suffering cannot always be addressed on the basis of mechanistic oversimplified, and universally applied, medical models; and decision making under cases of uncertainty cannot always be justified by the 'scientific authority' of causal laws. In my case I recurrently had to explain to my colleagues at the medical centre that protocols are not part of a wholistic Nutritional Medicine practice due the particular patient-centred and tailor-made nature of nutritional treatments. This was only realised when two of the doctors of the centre (and members of their families) followed nutritional therapies to address their chronic health problems. The fact that their treatments proved successful had an important effect on their perceptions and enhanced their respect to the methods used by Nutritional Medicine. This is one of the reasons for the continuance of our cooperation until

today. A second equally important reason is the respect to their approach from my side, in spite of the fact that I still disagree with many of their methods.

Through this cooperation I learned to never discuss with the patient any disagreements I might have with their doctor; however, I do not hesitate to discuss with the doctor about my views and possible disagreements, always in a conciliatory manner. The positive developments in my perceptions and my relations with the medical community are evident in an article on *The Complementary Role of Nutritional Medicine in Contemporary Medical Practice*, which I was invited to write by one of the doctors (and publisher of a medical magazine in which only medical doctors are invited to present their views). In this article I presented the ways by which a good cooperation can be established between Biomedicine and Nutritional Medicine. A second article published in this magazine elaborated on the role of Nutritional Medicine in the prevention and treatment of Diabetes. Worth noting is that a few months ago I was again invited, and accepted, to participate as a practitioner and shareholder in a new very big Medical Day Care Centre, planned to be established within the next three years. At least thirty medical practitioners will participate in this project, including a variety of specialities, as well as other paramedical professions and laboratories. This invitation was the outcome of my successful cooperation with two of the participant doctors for several years, who are among the major shareholders of this project.

During the course of my research I came across a number of critical incidents[1] which made me realise the enormous power of professional associations and regulatory bodies in promoting aims and achieving targets. In particular two powerful associations in Cyprus, the Cyprus Medical Association and the Cyprus Dietetic Association participate in, and often monopolise, all activities related to the provision of healthcare in Cyprus, at all levels –academic, political, governmental and public- with voting power in all policies and regulations. As a

consequence, the attempt to promote my profession as an individual appeared to be an extremely difficult, if not impossible, task. This consideration prompted me to apply in February 2010 to become full member with the British Association of Applied Nutrition and Nutritional Therapists (BANT). Worth noting is that I often practice in the United Kingdom, since some of my clients are British citizens. Through BANT I applied for registration with the newly established, government-sponsored, regulatory body, the Complementary and Natural Healthcare Council (CNHC) for which I had to prepare a volume of work in support of my application. The documents requested included: Character Reference Form; Qualifications, Training and Education form; Practice Self-audit; Two Patient Case Studies from my clinical practice; Career Summary and Statement of Practice; and Assessment Checklist. As part of the Statement of Practice and the Case Studies, I had to provide evidence that I fully follow the National Occupational Standards CNH8 and CNH9, as well as evidence for cooperation with medical doctors and other healthcare providers and for non-discriminatory practice, (*more details in Recommendations chapter*).

Back in Cyprus, the Business and Professional Women's Association of Cyprus (BPWA), in which I was already a member, established a number of Sub-committees, from which I chose to join the Health Committee in March 2010. The first task of the Health Committee was to implement a European programme for Cervical Cancer prevention, in both the urban and rural areas of Cyprus, in cooperation with the Ministry of Health. Three medical doctors, officials of the ministry of Health, joined our Committee and together we organised group seminars informing the public on the specific issue. I was offered to prepare a booklet for nutritional advice on cancer prevention, which is distributed by BPWA with other medical informative leaflets. We have established an excellent cooperation with the doctors of the Ministry, and the Minister of Health often accompanies us in our presentations. I believe this activity had a significant contribution to the promotion of Nutritional Medicine in the Cypriot society. We have already visited many areas of Cyprus, universities, villages, and in October 2010 we arranged a seminar in Nicosia to brief the public for our activities until

then on the prevention of Cervical Cancer. The doctors from the Ministry of Health presented on the medical side of cervical cancer and I presented on the nutritional biochemistry of the human body with the title: *The miracle of the human body*. The seminar was a great success with an overcrowded audience (*the Cervical Cancer prevention programme is still in progress*).

During this time I was invited by the a medical doctor (*pathological anatomist*) to offer two hourly presentations at the World Iridology Conference in Athens, which took place in October under the auspices of the University of Athens. The organising committee and the participants consisted of Iridologists, some of them also medical doctors, and two University of Athens professors were among the speakers. My first presentation was titled: *From theory to practice: the strengths and weaknesses of the practice of Iridology*, and it was a critical review of the limitations of the current medical paradigm in diagnosis of disease. The epistemological framework of reductionist approaches on the basis of Newtonian physics and the Cartesian analytical method was compared and contrasted with twentieth century physics -Relativity Theory and quantum mechanics. Examples from Eastern philosophies were used, emphasising on the role of *intuition* as one of the two major sources of knowledge in these areas of the world, the other being *reason* which is the sole source of knowledge in the western hemisphere. Reference was also made to the role of the *observer* in observation, who in modern physics is no longer called an *observer* but a *participator*. A significant part of the knowledge presented was acquired during the conduct of the literature review, being one of my methodologies for this action research. At the end of the presentation one of the two professors who teaches Surgery at the University of Athens, requested my presentation and she offered me to join her on a transnational research programme on Complementary Medicine. I consider the above offer as another important step towards the recognition of Nutritional Medicine by the medical community.

After being actively involved in the workings and politics of the British Association of Applied Nutrition and Nutritional Therapy (BANT), in February 2011 I was

appointed as *BANT Regional Coordinator for the Mediterranean*. This was the support I needed to promote my profession, because now I could request participation in decision making as representative of a professional Association. As a first step I requested a meeting with the Minister of Health in my capacity as BANT representative. The reason I requested the meeting was to comment on a New Bill aiming at modernising the legislation regulating the Food and Nutrition Sectors in Cyprus, which was tabled recently before the House of Representatives by the Ministry of Health. The new Bill, although providing for the regulation of Nutritionists -in addition to the already regulated professions of Food Scientists, Food Technologists and Dieticians- ignores the profession of the Nutritional Therapist. This appears to be in direct contradiction with the fact that Nutritional Therapists who are registered in any other country of the European Union, with either a regulatory body or a professional association recognised by the authorities, are automatically entitled to practice in Cyprus according to the Law, (*179 [1] of 2002*). The Acting Director of Medical Services of the Ministry, a medical doctor, who was also present in the meeting expressed his ignorance about the very existence of Nutritional Medicine as a profession and requested more information. I explained the role and scope of action of my profession providing them with a number of documents in support of my case, including a draft Bill which I prepared with the assistance of a legal advisor, and which provides for the regulation of Nutritional Medicine along with other professions in the area of Nutrition. The next step after the meeting was to send an informative letter, with a copy of the draft Bill I had prepared, to the Chairman of the Health Committee of the House of Representatives requesting to be invited to present my views, representing my professional association (BANT), when the Bill will be brought for discussion before the Committee. I keep BANT fully updated of all actions.

In conclusion, retrospection into the chronicle of this action research, allows no doubt that most –if not all- of the activities and events that accompanied the execution of this project would have not occurred, and most of the ideas stimulating action would have not been conceived, if this research was not undertaken. Responding reflexively to the multitude of stimuli during the course

of the research, reassessing and refining plans of action and modes of behaviour, and reclassifying priorities, in view of new knowledge acquired, has been a continuous process that lasted until the last minute of this project. Different inputs from different activities stimulated critical self-evaluation on a variety of issues, prompting for re-examination of deeper impulses and motives guiding action. Reflective practice helped me to acknowledge the strengths and weaknesses of every activity and to respect and anticipate, to the greatest possible extent and get prepared for, the arguments of the opposite side; and it provided me with the wisdom required for taking the right decision for the right action at the right time. The constant reconstruction and refinement of ideas, beliefs, and worldviews, though regular self-reflective practice, led to my personal development, which in turn provided the basis for more prudent action. I would like to end this critical commentary, highlighting the role of my consultant in this project who, being of a medical background, had a determinative contribution in guiding me to enhance objectivity in my writings, through the feedback process.

7. CONCLUSIONS/RECOMMENDATIONS

7.1. CONCLUSIONS

The aim of this research was to build up sound evidence on the role of Nutritional Medicine as a vital partner of 21st century medicine, particularly in the area of prevention and treatment of chronic disease; to evaluate the context and conditions within which this profession aspires to secure a respectable position along the spectrum of contemporary medical practice; and to appraise the possibility of its inclusion in the Cypriot National Health System.

The volume of evidence accumulated from this research and presented in detail in the Findings Chapter (*Chapter 5*) –and in the *EVIDENCE OF ACHIEVEMENT-* demonstrated that, in line with the worldwide awareness for a chronic disease 'pandemic', significant concerns exist amongst those directly or indirectly involved in the workings and politics of the wider Cypriot health sector for the rising incidence of chronic disease in Cyprus and for the need of a new philosophy in the provision of healthcare, particularly in the area of chronic disease, emphasising prevention rather than treatment and more patient-centred approaches, as currently proposed by the academic and political communities in Europe and the rest of the western world.

In addition, concerns were expressed by the majority of key actors for the outdated system of healthcare currently provided in Cyprus, in line with worldwide concerns for the inadequacy of most health systems of the western world to cope with the challenges posed by the rising number of ageing multi-diseased citizens. In a recent interview to the media, the President of the Cyprus Health Insurance Organisation claimed that 'the present public health sector has reached its limits'. He characteristically referred to the 'disappointment of citizens for the declining quality of services', in spite of the fact that the expenses of the public health sector increase at a rate of 11% per

year, stating emphatically that 'the modernisation of the General Health System represents a public demand' and that the present health system 'cannot be our answer to the society's demand for a more patient-centred system of health'. Similar views for the imperative of modernisation of the health system on the basis of other European systems were expressed by most of the key actors, including the Officials of the Health Insurance Organisation during our interviews.

Furthermore the results from this research in Cyprus appear to confirm literature demonstrating that Life Expectancies may have risen, according to reports by the Cypriot Ministry of Health, however Healthy Life Expectancies significantly fell, demonstrating that people may live longer, but in less than optimum health. The World Health Organisation has reported in 2006 that Cyprus occupies one of the lowest positions in Europe in Healthy Life Expectancy, with its citizens losing an average of 9.7 years of their life to illness and disability, and this loss is more than two years more than the European average (7.3 years). Worth noting is the finding of this research that Cypriots have adopted very unhealthy lifestyle habits, a fact reported by previous researchers as well. It was particularly demonstrated that 29.6% of Cypriots are active smokers, while 46.9% stated as passive smokers. In addition more than two thirds of Cypriots (71.6%) never exercise (57.0%) or exercise only a few times per month (14.6%), with only 15.1% stating that they exercise regularly at least three times weekly.

The suboptimal level of health of Cypriots was also evident from the statements of the majority of the population that they 'have not been cured completely' after treatment of their chronic health problems. In particular only 42.9%, of those treated in the past for one or more chronic health problems, stated as 'completely cured' after treatment, whereas the majority of them (57.1%) stated as 'not completely cured' after treatment. In addition, 18.8% of those stating as 'not completely cured' stopped their medication without being completely cured while 81.2% of them continue their medication. Even from

those stating as 'completely cured' after treatment (42.9%), a percentage (15.3%) continue to take medication for the specific problem(s) for which they were treated. In other words, only 36.3% of those who were treated for one or more health problems stated as 'completely cured' and 'do not take medication after treatment'.

In addition high levels of obesity were identified, confirming findings from previous research; almost half of the population are overweight (31.2%) or obese (15.5%), while significant positive correlations were deduced by the statistical analysis between obesity and many common chronic diseases, such as hypertension, hypercholesterolemia, cholelithiasis, depression, diabetes, arthritis and cardiovascular disease. Significant correlations were also found between different common chronic diseases of both physical and psychological nature, such as cardiovascular problems co-appearing with diabetes, cancer, stomach problems, insomnia and depression; diabetes together with skin problems, osteoporosis, hypertension, prostate, arthritis and insomnia; and bowel problems with stress, allergies, insomnia, skin problems, fungus infections, cholelithiasis and headaches. This finding was also confirmed by the analysis of Case Studies from Clinical Practice which showed that the vast majority of chronically ill persons, resorting to nutritional therapy, have multiple health problems, of both physical and psychological nature, occurring simultaneously. These correlations appear to confirm evidence in literature demonstrating that patients with multiple chronic health problems 'are the rule, rather than the exception', and highlight the imperative for more patient-centred, wholistic approaches. A related issue recently brought up during the last decades by several researchers is the importance of the General Practitioner, or Family Doctor, as a counterweight to over-specialisation. The high specialisation has been recurrently criticised as not always providing effective solutions in the area of chronic disease, for undermining continuity of care in patients with multiple chronic health problems and for 'losing sight of the whole person'; without, of course, underestimating the enormous contribution of high specialism in several areas of the provision of healthcare.

A significant finding of the research was that chronic disease is more frequent among the most deprived groups of the society, confirming literature that the solutions for optimising the health of citizens is not in the hands of the medical community only, but requires radical political decisions to address the strong socioeconomic element hiding underneath. This research confirmed that other, than those traditionally considered by the current system of healthcare, significant determinants of health exist. Area of residence, level of education, family status, age, and income were found by statistical analysis to be strongly related to chronic disease. In particular people living in urban areas experience, more frequently than those in rural areas, a number of common chronic diseases, such as cancer, prostate, hypertension, cardiovascular disease, depression, osteoporosis and asthma. Also some widely spread chronic diseases, such as cardiovascular disease, hypertension, diabetes, osteoporosis, arthritis, cholelithiasis and hypercholesterolemia, appear more frequently at the lower educational strata of the society, while equally common health problems, such as headaches and constipation are more frequent among college/university graduates. Interestingly depression appears more frequently among those at mid-level education (high school). Family status was also a significant determinant of disease. Depression, for example was completely absent from single people, very low in the married, and at high levels among divorced people. Family income was also a significant determinant of health. It was shown that the higher the income the less health problems. Some widely appearing health problems, such as arthritis, cardiovascular disease, stress, skin problems, drug addiction and cancer appear more frequently among those with lower family incomes. As regards age, although most chronic health problems appear to be positively related with age, some common chronic diseases, such as asthma, depression, bowel problems, headaches, stress, allergies and constipation have not significantly correlation with age, confirming evidence in literature, that chronic disease occurs increasingly at lower ages.

These findings may explain why Cypriots, following the trends of other European citizens, resort to alternative and complementary methods of treatment, often in conjunction with their medical treatments, in an effort to find solutions to their chronic health problems. This trend was found to be particularly strong among those with high education and high income, demonstrating that, if Cypriots 'know' (the educated) and 'can afford' (high income) they are more likely to choose alternative or complementary to the conventional, solutions to treatment. It was particularly shown that people of high education have low preference of pharmaceutical means and high preference of nutritional supplements for addressing a specific health problem. High preference for nutritional supplements was also evident amongst people with higher incomes. Long term dependency to some kind of drugs was also high at lower educational strata of the population gradually decreasing and reaching zero level amongst highly educated citizens. A further finding of the research demonstrated that 46% of the population would accept to follow a strict diet for therapy, if that was offered to them.

In spite of these preferences, however, the research demonstrated a high use of Drug and Surgery treatments among Cypriots and very low use of other methods, such as diet and nutritional supplements. In particular, Drug and Surgery approaches are the top in the order of treatments, being used by 46.0% and 27.3% of the population respectively, while only 11.4% used diet and 5.8% nutritional supplements for treatment of a health problem, and smaller percentages other non-conventional treatments. This paradox demonstrates a clear gap between the policies of the state and the desires/expectations/needs of citizens. Apparently, people resort mainly to Drug and Surgery because these are the only treatments currently offered by the National Health System and these are mainly prescribed by doctors, as shown by the research. In the analysis of Case Studies it was found that nutritional prescriptions to patients by their doctor are confined to the 14% of them consisting mainly of Iron, Calcium and Multivitamins, always in conjunction with medical prescriptions. In addition, dietary means, such as

Nutritional Supplements, which are not currently provided by the state appear to be very expensive for many Cypriots, the majority of which (68%) have a total family income below 3.000 Euros. As demonstrated by the research those that can afford them (high income), or know about them (high education), appear to resort to nutritional means of treatment, often as complementary to their medical treatments. The education element in the choice of treatment was also evident in the patients resorting to Nutritional Medicine treatments. As demonstrated from the analysis of Case Studies from Clinical Practice, the majority of patients requesting nutritional therapy belong to the higher educational strata (56.7%) while 40.1% are of secondary education and only 3.2% of elementary education. Comparing with the proportion on educated people within the whole population, reveals that the proportion of educated people visiting the nutritional therapist are, in fact, more than double.

The gap between state policies and people's desires/expectations/needs was also evident by other findings of this research. The current model of healthcare which focuses on a disease- rather than patient centred healthcare (in line with most western health systems), was found to be disapproved by a significant percentage of the population. In particular, 32.9% of Cypriots stated as dissatisfied with the time allocated to them to see their General Practitioner for a specific health problem, with only 21.7% stating 'very much' or 'much' satisfied. The percentage of dissatisfaction appears to rise further to the question if they are given the opportunity to discuss with their doctor their general state of health, apart from the particular problem for which they have visited him/her. In this case 43.4% of the population stated as 'not given any' or 'given little' opportunity to have a more patient-centred approach. The need for a more wholistic model of healthcare was also supported by the evidence above demonstrating other than those traditionally considered by the health sector determinants of health, such as area of residence, education, family status and income, as well as the frequent resort to non-conventional, more patient-centred approaches, by those who can afford them and are informed

about them. This evidence is in line with worldwide concerns for the need of more patient-centred approaches, which appear to be more effective in the treatment of chronically ill people with multiple health problems, as discussed above.

Nutritional Medicine as a profession was found to be largely unknown by the majority of key actors, although, after being informed about it by the interviewer, almost all supported the idea of having a role in the National Health System alongside the currently provided medical system. A related finding of the research confirmed evidence in literature that contemporary healthcare providers are not adequately educated and trained to provide evidence-based therapeutic nutritional interventions, and in general they do not offer therapeutic nutritional advice as part of their routine daily practice. The majority of Cypriot medical practitioners study medicine in the medical schools of Europe and the United States, in which literature has revealed that this education and training in Nutritional Therapy is not currently provided, in spite of the fact that it is a general belief amongst the medical community, both worldwide and in Cyprus that nutritional advice falls within their scope of practice. The statistical analysis of the results of the research did not support the belief by some key actors that scientific therapeutic interventions are applied in Cyprus (perhaps only in a very small scale), since 74% of the supplements used by Cypriots were not prescribed by a practitioner (doctor, nutritional therapist, or homeopath) and are mainly multivitamins, iron, calcium and vitamin C. These supplements, particularly multivitamins, although generally beneficial to health, are not usually part of a routine Nutritional Medicine practice, which focuses on tailor-made prescriptions for each individual patient. Furthermore, another finding of the research demonstrated that Calcium is the most frequently prescribed nutritional supplement by doctors. In particular medical prescriptions were found responsible for 76.7% of calcium used by Cypriots, despite the volume of evidence in support of the harmful effects of large amounts of calcium in the human body, such as tissue calcifications. Nutritional Medicine uses calcium with care, and if needed

prepares the body to accept it properly by restoring the body's calcium handling capacity if compromised.

7.2. RECOMMENDATIONS

All above provide solid grounds for the need the State to offer Nutritional Science (in its applied form as Nutritional Medicine) the position it deserves. Nutritional Medicine appears by evidence to have a vital role to perform as a patient-centred approach along the spectrum of medical practice of the twenty first century. This fact has been acknowledged and promoted by the worldwide academic community and it is gradually gaining the respect of the medical community, as demonstrated in *Chapter 5.4.1. Finding Seven*. This research has built up adequate evidence to support the argument that both the Medical Unions and the Dietetic Association have nothing to fear from the inclusion of Nutritional Medicine into the National Health system. Nutritional Medicine does not aspire to replace neither Classical Medicine, not Dietetic practice. It aims to fill an existing gap, identified by this research, in the area of prevention and treatment of chronically ill people. The evidence presented in this report, and in the Evidence of Achievement, has demonstrated that the medical community, placing the benefit of the patient at the heart of all actions, has to gain rather than lose from the introduction of Nutritional Medicine, which has the capacity to offer solutions not currently provided by contemporary healthcare. Within the context of teamwork and combining the high level of knowledge, expertise, specialisation and biotechnology of Biomedicine with the power of Nutritional Science on modulating metabolic function and gene expression, only benefits can result to the Cypriot public from this cooperation. Neither Clinical Dieticians have a reason to be antagonistic to Nutritional Medicine, because none of them practices Nutritional Medicine and, oppositely, Clinical Dietetic practice cannot be replaced by Nutritional Therapy since both belong to different spheres of clinical practice and are based on clearly different education and training.

The finding that, 'if people know and if they can afford', they opt for nutritional means, substantiates the imperative for satisfying public demand through regulation of Nutritional Medicine. It demonstrates that the Cyprus public appears ready and eager for a modernised health sector, in which they can have access to nutritional means without spending a fortune on it and feeling safe that the state provides for their protection from unauthorised therapists, to whom they trust their health. Non-regulation for years allowed the sprouting in Cyprus of non-professional therapists who, hiding under the 'alternative' umbrella, and in the name of naturopathy, fiercely attack Classical Medicine. I have recurrently presented in conferences, public speeches and articles my opposition to the use of the term 'alternative' which hides behind the chasm between the so called 'orthodox' and 'alternative' schools of medical thought. This antagonism in no way offers any service to the desperate efforts of humanity to harness the uncontrollable rising of chronic disease, the worst epidemic of this generation. Any therapeutic approach that uses methods and means supported by sound scientific evidence has a role in the effort to promote health and treat disease; and Nutritional Medicine is one of these, as an evidence-based therapeutic approach supported by a volume of scientific studies- clinical, experimental, epidemiological and other (*as presented in this report and the Evidence of Achievement*).

Although self regulation appears to be an option, the special circumstances and arrangements in Cyprus make regulation through registration in a statutory body a more viable (financially and otherwise) option. Cyprus is a small country and cannot afford to support a big number of regulatory bodies. In addition, a statutory body already exists, the Registration Board for Food Scientists/Technologists and Dietitians with which at present, all Food Scientists/Technologists and Dietitians are required to be registered, (Law (N31(I)/96)), whilst a Bill already tabled by the Ministry of Health before the House of Representatives, provides for the inclusion of Nutritionists in the list of professions regulated by this Law. It would, therefore, appear that an

optimal solution would be for the Law and the Board to cover all professions relating to Food and Nutrition, by including Nutritional Medicine. In my capacity as Regional Coordinator for the Mediterranean of the British Association for Applied Nutrition and Nutritional Therapy, I have already submitted a draft Bill to the Minister of Health and to the Health Committee of the House, recommending the implementation of this idea.

In addition the Health Insurance Organisation should seriously consider the results of this research which demonstrate that prevention of a large number of common chronic diseases is possible and attainable, through application of the principles of Nutritional Medicine, with a consequent significant reduction of the expenses of lifelong medical treatments, which are estimated to greatly increase with the rising proportion of aged population. The research has clearly demonstrated that citizens opt for nutritional rather than medical means if they can afford to pay for them (high income) and if they are adequately informed about them (highly educated). Those elected by the citizens to serve the public common good have the obligation to offer to them the highest possible quality of healthcare which will offer them the possibility to live healthily and die in old age without morbidity and disability.

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APPENDIX 1

SURVEY QUESTIONNAIRE

ΜΕΡΟΣ Α: ΔΗΜΟΓΡΑΦΙΚΑ ΣΤΟΙΧΕΙΑ

1. **Έτος γέννησης** ☐

2. **Φύλο:**
   Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Άνδρας	
Γυναίκα	

3. **Ύψος** ☐ **εκατοστά**

4. **Βάρος** ☐ **κιλά**

5. **Πίεση**
   Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Πιο χαμηλή από την κανονική	
Κανονική	
Πιο ψηλή από την κανονική	

6. **Οικογενειακή κατάσταση**
   Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Έγγαμος/ η	
Άγαμος/ η	
Χήρος/α	
Χωρισμένος/η	

7. **Αριθμός τέκνων** ☐

8. **Σπουδές**
   Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Μέχρι Δημοτικό	
Γυμνάσιο/Λύκειο	
Κολλέγιο/Πανεπιστήμιο	

9. Διαμονή

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

	Αστική	Αγροτική
Λευκωσία		
Λεμεσός		
Λάρνακα		
Πάφος		
Αμμόχωστος		

10. Επάγγελμα----------

……

11. Πόσες ώρες εργάζεστε καθημερινά; ☐ **ώρες**

12. Είστε καπνιστής;

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

ΝΑΙ	
ΟΧΙ	

13. Είστε παθητικός καπνιστής; (*κάποιος καπνίζει στον σπίτι, ή στο χώρο εργασίας*)

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

ΝΑΙ	
ΟΧΙ	

14. Πόσο συχνά γυμνάζεστε το μήνα;

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Καθόλου	
Αραιά *(μερικές φορές τον μήνα)*	
Ελαφρά άσκηση *(1-2 φορές την εβδομάδα)*	
Μέτρια (*3-4 φορές την εβδομάδα)*	
Συστηματικά *(καθημερινά: πχ γυμναστήριο ή ποδήλατο ή κολύμπι ή γοργό περπάτημα ή άλλη εντατική άσκηση)*	

15. Σημειώστε ποια από τα παρακάτω γεύματα τρώτε κάθε μέρα;

Σημειώστε Χ στα τετραγωνάκια που ισχύουν στην περίπτωση σας

Πρόγευμα	
Γεύμα	
Δείπνο	
Ενδιάμεσα σνακς	

ΜΕΡΟΣ Β: ΤΡΟΠΟΙ ΠΡΟΛΗΨΗΣ ΚΑΙ ΘΕΡΑΠΕΙΑΣ ΧΡΟΝΙΩΝ ΑΣΘΕΝΕΙΩΝ

16. Σημειώστε αν υποφέρετε ή υποφέρατε στο παρελθόν από κάποιο από τα πιο κάτω προβλήματα υγείας.
Σημειώστε Χ στο τετραγωνάκι (ή τετραγωνάκια) που ισχύει στην περίπτωση σας

Δεν υποφέρω ούτε υπέφερα στο παρελθόν από κανένα πρόβλημα υγείας	
Άγχος	
Αλλεργίες	
Αρθριτικά	
Άσθμα	
Δυσκοιλιότητα	
Αϋπνία	
Γυναικολογικά	
Δερματικά	
Διαβήτης	
Εντερικά ***(Φουσκώματα, ευερέθιστο έντερο, σπαστική κολίτιδα, διάρροιες, κλπ)***	
Εξάρτηση από φάρμακα	
Θυρεοειδής	
Καρδιά	
Καρκίνος	
Κατάθλιψη	
Μύκητες	
Νεφροπάθεια	
Οστεοπόρωση ή οστεοπενία	
Ουρικό οξύ	
Παχυσαρκία	
Πέτρες στην χολή	
Πίεση	
Πονοκέφαλοι	
Προστάτης	
Στομάχι ***(φουσκώματα, έλκος, γαστρίτιδα, δυσπεψία, κλπ)***	
Χοληστερόλη	
Άλλο πρόβλημα υγείας που δεν περιλαμβάνεται πιο πάνω	

17. Σημειώστε αν κάνατε κάποιες από τις πιο κάτω θεραπείες για το πρόβλημα (ή τα προβλήματα σας)

Σημειώστε Χ στο τετραγωνάκι (ή τετραγωνάκια) που ισχύει στην περίπτωση σας

Εγχείρηση	
Με φάρμακα	
Με ειδική δίαιτα	
Με διατροφικά συμπληρώματα (βιταμίνες, βότανα, κλπ)	
Ομοιοπαθητική	
Άλλη εναλλακτική θεραπεία (βελονισμός, χειροπρακτική, οστεοπαθητική, φυσιοθεραπεία, φυσικοπαθητική, βοτανοθεραπεία, μασάζ κλπ)	

18. Αν κάνατε περισσότερες από ένα είδος θεραπείας για το ίδιο πρόβλημα, με ποια σειρά τις κάνατε;

Σημειώστε στο τετραγωνάκι δίπλα από την κάθε θεραπεία την σειρά προτεραιότητας που την κάνατε με αριθμούς: 1,για την πρώτη θεραπεία, 2 για την δεύτερη κλπ

	Αριθμός
Εγχείρηση	
Με φάρμακα	
Με ειδική δίαιτα	
Με διατροφικά συμπληρώματα (βιταμίνες, βότανα, κλπ)	
Ομοιοπαθητική	
Άλλη εναλλακτική θεραπεία (βελονισμός, χειροπρακτική, οστεοπαθητική, φυσιοθεραπεία, φυσικοπαθητική, βοτανοθεραπεία, μασάζ κλπ)	

19. Ποια θεραπεία πιστεύετε ότι ήταν η περισσότερο αποτελεσματική για το πρόβλημα σας;

Σημειώστε με αριθμούς τον βαθμό αποτελεσματικότητας (πχ 1:για την περισσότερο αποτελεσματική θεραπεία, 2:για την δεύτερη πιο αποτελεσματική κλπ.

	Αριθμός
Εγχείρηση	
Με φάρμακα	
Με ειδική δίαιτα	
Με διατροφικά συμπληρώματα (βιταμίνες, βότανα, κλπ)	
Ομοιοπαθητική	
Άλλη εναλλακτική θεραπεία (βελονισμός, χειροπρακτική, οστεοπαθητική, φυσιοθεραπεία, φυσικοπαθητική, βοτανοθεραπεία, μασάζ κλπ)	

20. Συνεχίζετε να παίρνετε φάρμακα για το πρόβλημα υγείας για το οποίο κάνατε την θεραπεία (ή τις θεραπείες);

ΝΑΙ	
ΟΧΙ	

21. Πιστεύετε ότι έχετε θεραπευθεί εντελώς από το πρόβλημα για το οποίο κάνατε θεραπεία;

ΝΑΙ	
ΟΧΙ	

22. Σημειώστε ποια από τα παρακάτω διατροφικά συμπληρώματα χρησιμοποιείτε ή χρησιμοποιήσατε στο παρελθόν?

Σημειώστε X στα τετραγωνάκια που ισχύουν στην περίπτωση σας

Πολυβιταμίνες διάφορες	
Βιταμίνη Α	
Βιταμίνες Β	
Βιταμίνη Γ (Vitamin C)	
Βιταμίνη Δ (Vitamin D)	
Βιταμίνη Ε	
Φολικό οξύ (Folic acid)	
Ασβέστιο (Calcium)	
Μαγνήσιο	
Ψευδάργυρος (Zinc)	
Σίδηρος	
Σελήνιο (Selenium)	
Λάδι νυχτολούλουδου (Evening primrose oil)	
Αλόη Βέρα (Aloe Vera)	
Εχινάκια (Echinacea)	
Ginkgo Biloba	
Βασιλικός πολτός (Royal jelly)	
Ginseng	
Propolis	
Γύρις (fresh pollen)	
Γκουαράνα (Guarana)	
Σπιρουλίνα	
Συμπληρώματα σκόρδου	
Valeriana	
Μαγιά μπύρας (brewer's yeast)	
Λεκιθίνη	
Milk Thistle	
Co Enzyme Q10	
Συμπληρώματα για χάσιμο βάρους *(χρωμίου, καφεΐνης, πράσινου τσαγιού, Carnitine, Kelp κλπ)*	
Συμπληρώματα για αθλητική απόδοση *(Creatinine, Whey Protein, Glutamine, Arginine, Ornithine, CLA, BLAA, ισοτονικά ποτά κλπ)*	
Παράγωγα σόγιας *(γάλα σόγιας, ισοφλαιβόνες, τοφού κλπ)*	
Ωμέγα 3 *(Fish oil, Λάδι λιναρόσπορου, Linseed oil, Flaxseed oil, EPA/DHA,κλπ)*	
Βότανα για δυσκοιλιότητα *(Σέννα, φύλλα Αιγύπτου, τσάι με διάφορα βότανα, Psyllium κλπ)*	
Probiotics *(Acidophilus, Lactobacillus, κεφίρ, Inulac κλπ)*	
Άλλα συμπληρώματα (αναφέρατε ονομαστικά πιο κάτω	

23. Ποιος ειδικός σας συμβουλεύει για να πάρετε διατροφικά συμπληρώματα;

Σημειώστε Χ στα τετραγωνάκια που ισχύουν στην περίπτωση σας

Κανείς	
Ιατρός	
Ειδικός θεραπευτικής διατροφολογίας	
Διαιτολόγος	
Ομοιοπαθητικός	
Φαρμακοποιός	
Γυμναστής	
Πωλητής καταστήματος υγιεινής διατροφής	

24. Σε ποιο βαθμό είστε διατεθειμένοι, αντί να πάρετε φάρμακα, να ακολουθήσετε μια διατροφική θεραπεία η οποία θα απαιτούσε αυστηρή δίαιτα με αποχή από αγαπημένα σας φαγητά με αντάλλαγμα την πλήρη αποθεραπεία σας;

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Καθόλου	
Λίγο	
Αρκετά	
Πολύ	
Πάρα πολύ	

25. Πόσο συχνά ακολουθείτε τις πιο κάτω θεραπείες όταν έχετε κάποιο πρόβλημα υγείας; ***Σημειώστε Χ στο τετραγωνάκι που ισχύει στην κάθε περίπτωση πιο κάτω***

ΘΕΡΑΠΕΙΑ	**ΠΟΤΕ**	**ΑΡΑΙΑ**	**ΣΥΧΝΑ**	**ΠΟΛΥ ΣΥΧΝΑ**	**ΠΑΝΤΟΤΕ**
Με φάρμακα					
Με ειδική δίαιτα					
Με διατροφικά συμπληρώματα (βιταμίνες, βότανα, κλπ)					
Ομοιοπαθητική					
Άλλη εναλλακτική θεραπεία (βελονισμός, χειροπρακτική, οστεοπαθητική, φυσιοθεραπεία, φυσικοπαθητική, βοτανοθεραπεία, μασάζ κλπ)					

26. Σε ποιο βαθμό πιστεύετε ότι ο χρόνος που σας παρέχεται για να δείτε τον παθολόγο σας όταν είστε άρρωστοι, είναι αρκετός για να συζητήσετε διεξοδικά το πρόβλημα υγείας σας;

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

Καθόλου	
Λίγο	
Αρκετά	
Πολύ	
Πάρα πολύ	

27. Σε ποιο βαθμό πιστεύετε ότι σας δίνεται η ευκαιρία να συζητήσετε με τον γιατρό σας τα γενικότερα προβλήματα υγείας σας εκτός από το συγκεκριμένο πρόβλημα για το οποίο τον επισκεφθήκατε;

Σημειώστε Χ στο τετραγωνάκι (ή τετραγωνάκια) που ισχύει στην περίπτωση σας

Καθόλου	
Λίγο	
Αρκετά	
Πολύ	
Πάρα πολύ	

28. Σε ποια από τις πιο κάτω κατηγορίες εμπίπτει το καθαρό μηνιαίο εισόδημα της οικογένειας (συμπεριλαμβανομένου του εισοδήματος του/της συζύγου σας)

Σημειώστε Χ στο τετραγωνάκι που ισχύει στην περίπτωση σας

€0 – €1000	
€1001 – €2000	
€2001 – €3000	
€3001 – €4000	
€4001– €5000	
€5001 και άνω	

APPENDIX 2: CORRELATIONS BETWEEN HEALTH PROBLEMS

	Stress	Allergies	Arthritis	Asthma	Constipation	Insomnia	Gynaecologic Problems	Skin Problems	Diabetes	Bowel Problems	Drug Addiction	Thyroid Problems	Cardiovascular Problems	Cancer	Depression	Fungi	Kidney diseases	Osteoporosis	Uric Acid	Obesity	Cholelithiasis	Hypertension	Headaches	Prostate	Stomach Problems	Cholesterol	Other problems
Stress		0.140**	0.113*	0.061	0.184**	0.377**	0.177**	0.258**	0.044	0.220**	0.229**	0.004	0.063	-0.002	0.280**	0.154**	0.178**	-0.003	-0.037	0.162**	0.191**	0.055	0.345**	-0.021	0.203**	0.102*	-0.003
Allergies	0.140**		-0.029	0.177**	0.196**	0.171**	0.065	0.149**	-0.029	0.208**	-0.048	0.101*	-0.076	-0.051	0.127**	0.051	0.024	-0.023	-0.025	0.056	-0.048	-0.029	0.165**	-0.014	0.005	0.052	-0.038
Arthritis	0.113*	-0.029		0.053	0.022	0.201**	0.009	0.038	0.022	0.033	0.065	0.065	0.111*	-0.046	0.067	0.065	0.033	0.158**	0.184**	0.075	0.065	0.098*	0.092*	-0.013	0.098*	0.104*	0.009
Asthma	0.061	0.177**	0.053		0.093*	0.118*	0.078	-0.032	-0.036	0.012	-0.026	0.059	-0.041	-0.028	0.097*	0.059	-0.021	0.034	-0.014	0.072	0.059	-0.014	0.027	-0.008	0.089	0	-0.04
Constipation	0.184**	0.196**	0.022	0.093*		0.121**	0.046	0.076	0.06	0.125**	0.037	0.037	-0.052	-0.035	0.117*	0.037	-0.026	0.012	-0.017	-0.005	0.106*	0	0.169**	-0.01	0.056	0.018	
Insomnia	0.377**	0.171**	0.201**	0.118*	0.121**		0.101*	.195**	0.033	0.159**	0.135**	0.194**	0.092*	0.07	0.396**	0.252**	.114*	0.04	0.09	0.169**	0.252**	0.150**	0.346**	-0.012	.287**	.158**	0.02
Gynaecologic Problems	0.177**	0.065	0.009	0.078	0.046	0.101*		0.009	-0.049	0.023	-0.036	0.028	-0.014	0.023	0.148**	0.156**	0.131**	-0.047	-0.019	0.07	-0.036	0.019	0.173**	-0.011	0.09	0.078	0.033
Skin Problems	0.258**	0.149**	0.038	-0.032	0.076	.195**	0.009		0.134**	0.151**	0.204**	0.126**	-0.046	-0.031	0.199**	0.204**	0.170**	0.023	0.132**	0.211**	0.204**	0.093*	0.243**	-0.009	0.129**	0.210**	0.063
Diabetes	0.044	-0.029	0.022	-0.036	0.06	0.033	-0.049	0.134**		-0.009	0.316**	0.037	0.133**	0.032	0.01	-0.033	0.148**	0.122**	-0.017	0.179**	.106*	0.140**	0.065	0.219**	0.005	0.137**	0.046
Bowel Problems	0.220**	0.208**	0.033	0.012	0.125**	0.159**	0.023	0.151**	-0.009		0.139**	0.02	0.017	0.073	0.222**	0.139**	0.117*	-0.051	0.093*	0.135**	0.139**	0.005	0.149**	-0.012	0.250**	0.096*	0.023
Drug Addiction	0.229**	-0.048	0.065	-0.026	0.037	0.135**	-0.036	0.204**	0.316**	0.139**		0.069	0.208**	0.242**	0.254**	0.162**	0.213**	-0.031	0.164**	0.393**	0.348**	0.276**	0.269**	0.298**	0.102*	0.326**	-0.036
Thyroid Problems	0.004	0.101*	0.065	0.059	0.037	0.194**	0.028	0.126**	0.037	0.02	0.069		-0.038	-0.025	0.111*	-0.024	-0.019	0.042	-0.013	0.085	-0.024	0.136**	0.223**	-0.007	0.034	0.114*	-0.036
Cardiovascular Problems	0.063	-0.076	0.111*	-0.041	-0.052	0.092*	-0.014	-0.046	0.133**	0.017	0.208**	-0.038		0.137**	0.092*	0.085	-0.03	0.048	-0.02	0.144**	0.085	0.012	0.038	-0.011	0.127**	0.105*	0.112*
Cancer	-0.002	-0.051	-0.046	-0.028	-0.035	0.07	0.023	-0.031	0.032	0.073	0.242**	-0.025	0.137**		0.103*	0.153**	-0.02	0.108*	-0.013	0.137**	0.153**	-0.01	0.032	0.285**	0.095*	0.105*	-0.038
Depression	0.280**	0.127**	0.067	0.097*	0.117*	0.396**	0.148**	0.199**	0.01	0.222**	0.254**	0.111*	0.092*	0.103*		0.182**	-0.026	0.015	-0.017	0.281**	0.111*	-0.033	0.141**	-0.01	0.06	0.184**	0.001
Funghi	0.154**	0.051	0.065	0.059	0.037	0.252**	0.156**	0.204**	-0.033	0.139**	0.162**	-0.024	0.085	0.153**	0.182**		0.097*	-0.031	-0.013	0.208**	0.255**	0.042	0.223**	-0.007	0.375**	0.167**	-0.036
Kidney diseases	0.178**	0.024	0.033	-0.021	-0.026	.114*	0.131**	0.170**	0.148**	0.117*	0.213**	-0.019	-0.03	-0.02	-0.026	0.097*		-0.025	-0.01	0.124**	0.213**	0.134**	0.188**	-0.006	0.058	0.162**	0.051
Osteoporosis	-0.003	-0.023	0.158**	0.034	0.012	0.04	-0.047	0.023	0.122**	-0.051	-0.031	0.042	0.048	0.108*	0.015	-0.031	-0.025		-0.016	0	-0.031	0.044	0.04	-0.009	0.01	0.067	0.054
Uric Acid	-0.037	-0.025	0.184**	-0.014	-0.017	0.09	-0.019	0.132**	-0.017	0.093*	0.164**	-0.013	-0.02	-0.013	-0.017	-0.013	-0.01	-0.016		-0.02	0.164**	0.151**	-0.028	-0.004	0.112*	0.077	-0.019
Obesity	0.162**	0.056	0.075	0.072	-0.005	0.169**	0.07	0.211**	0.179**	0.135**	0.393**	0.085	0.144**	0.137**	0.281**	0.208**	0.124**	0	-0.02		0.270**	0.198**	0.191**	0.191**	0.127**	0.210**	-0.057
Cholelithiasis	0.191**	-0.048	0.065	0.059	0.106*	0.252**	-0.036	0.204**	.106*	0.139**	0.348**	-0.024	0.085	0.153**	0.111*	0.255**	0.213**	-0.031	0.164**	0.270**		0.089	0.177**	-0.007	0.307**	0.220**	-0.036
Hypertension	0.055	-0.029	0.098*	-0.014	0	0.150**	0.019	0.093*	0.140**	0.005	0.276**	0.136**	0.012	-0.01	-0.033	0.042	0.134**	0.044	0.151**	0.198**	0.089		0.164**	0.138**	.099*	0.303**	-0.014
Headaches	0.345**	0.165**	0.092*	0.027	0.169**	0.346**	0.173**	0.243**	0.065	0.149**	0.269**	0.223**	0.038	0.032	0.141**	0.223**	0.188**	0.04	-0.028	0.191**	0.177**	0.164**		-0.016	0.195**	0.267**	-0.08
Prostate	-0.021	-0.014	-0.013	-0.008	-0.01	-0.012	-0.011	-0.009	0.219**	-0.012	0.298**	-0.007	-0.011	0.285**	-0.01	-0.007	-0.006	-0.009	-0.004	0.191**	-0.007	0.138**	-0.016		-0.01	0.160**	-0.011
Stomach Problems	0.203**	0.005	0.098*	0.089	0.056	.287**	0.09	0.129**	0.005	0.250**	0.102*	0.034	0.127**	0.095*	0.06	0.375**	0.058	0.01	0.112*	0.127**	0.307**	.099*	0.195**	-0.01		0.170**	-0.051
Cholesterol	0.102*	0.052	0.104*	0	0.018	.158**	0.078	0.210**	0.137**	0.096*	0.326**	0.114*	0.105*	0.105*	0.184**	0.167**	0.162**	0.067	0.077	0.210**	0.220**	0.303**	0.267**	0.160**	0.170**		-0.068
Other problems	-0.003	-0.038	0.009	-0.04	-0.049	0.02	0.033	0.063	0.046	0.023	-0.036	-0.036	0.112*	-0.038	0.001	-0.036	0.051	0.054	-0.019	-0.057	-0.036	-0.014	-0.08	-0.011	-0.051	-0.068	

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

APPENDIX 3

ANALYSIS OF CASE STUDIES FROM CLINICAL PRACTICE

MEDICAL PRESCRIPTIONS FOR SPECIFIC HEALTH PROBLEMS

APPENDIX 3

NOTE:

THE VARIOUS MEDICAL EVENTS, DIAGNOSES, OPERATIONS, PRESCRIBED MEDICATION, ETC LISTED IN THE COLUMNS BELOW, WERE QUOTED DURING TAKING THE PATIENT'S CASE HISTORY AND MAY HAVE OCCURRED AT DIFFERENT STAGES OF A PATIENT'S LIFE OFTEN OVER A LONG PERIOD OF TIME

PATIENT	PATIENTS' SYMPTOMS	MEDICAL DIAGNOSES	MEDICAL OPERATIONS	PRESCRIBED MEDICATION	CHRONIC AND/OR RECURRENT USE OF MEDICATION WITH OR WITHOUT DOCTOR'S ADVICE	NUTRITIONAL ADVICE BY DOCTOR	DOCTOR'S REFERRAL TO NUTRITIONIST
P1	Feels tired all the time. Weight gain. Dehydrated. Chronic constipation. Mood swings	Oestrogen sensitive breast cancer. Fatigue. Menopause. Stress. Constipation	Tumour removed,	Tumour removed,	Laxatives	NO	NO
P2	Feels tired all the time. Severe hair falling. Chronic GI discomfort with bloating, heartburn and indigestion. Chronic musculoskeletal pains. Varicose veins. Chronic unstable body temperature. Leg bruises. Skin rashes	Prediabetic. Fatigue. Hypercholesterolemia. Fungus infections. Alopecia. Cholelithiasis. Arthritis. Hay fever.	Gallbladder removed, benign breast tumour removed	HRT for menopause, cortisone for alopecia, statins for cholesterol (chronic), proton pump inhibitors and antacids for gastritis and GERD, NSAIDs for arthritis, steroidal creams for skin rashes, antihistamines for hay fever	NSAIDs, statins, proton pump inhibitors, steroidal creams, antihistamines, antacids	NO	NO

		Menopause. Gastritis. GERD[1]. Varicose veins.					
P3	Chronic GI[2] problems with constipation, bloating and indigestion. Falling hair. Low moods	Thalassaemia. Osteoporosis. Irritable bowel syndrome. Gastritis	regular blood transfusions	Iron lowering medication, aledronate calcium & vit. D for osteoporosis, proton pump inhibitors and antacids for gastritis and indigestion, laxatives for constipation	iron lowering medication, aledronate, calcium, vitamin D, proton pump inhibitors, antacids and laxatives	NO	YES
P4	Chronic respiratory discomfort. Skin rashes. Dry eyes. Chronic GI problems with bloating, indigestion heartburn and constipation, cannot become pregnant. Chronic headaches	Asthma. Allergic rhinitis. Eczema. Irritable bowel syndrome. Xeropthalmia. Very high ferritin levels. Gastritis		Laxatives for constipation, proton pump inhibitors and antacids for gastritis, eye drops, antibiotics, cortisone and other drugs for asthma, antihistamines for allergic rhinitis, B12 injections	Corticosteroids and other bronchodilators, proton pump inhibitors, antihistamines, Laxatives and antacids, eye drops.	NO	NO

[1] GERD: Gastroesophageal reflux disease
[2] GI: Gastrointestinal

P5	Bowel severely ruptured by accidental gunshot. Feels tired all the time. Indigestion, bloating, heartburn. Arrhythmias. Skin rashes, runny nose. Depressed. Can eat only a restricted selection of foods, chooses to be socially isolated, unhappy	Recurrent bowel adhesions and fistulae. Fatigue. Stress. Allergies. Irritable bowel syndrome. GERD[1]	recurrent bowel operations, removal of colon parts at the sites of adhesions	antibiotics for bowel adhesions, antidepressants for depression and stress, antihistamines for allergies, proton pump inhibitors for GERD, antacids for indigestion, bloating and heartburn	antibiotics, antidepressants, proton pump inhibitors, antihistamines, antacids	Advised avoidance of all vegetables, fruit, beans and spices for the rest of his life	NO
P6	Chronic musculoskeletal pains. Chronic GI discomfort with bloating and indigestion. Water retention. Skin rashes. Frequent urine infections	Osteopenia. Arthritis. Cystitis Morton's Neuroma, Gastritis. Allergies. Fatigue		NSAIDs for arthritis, Raloxifene Hydrochloride with Calcium & Vit D for osteopenia, proton pump inhibitors and antacids for Gastritis, steroidal creams for skin rashes, antibiotics for Cystitis	NSAIDs, antacids, Raloxifene Hydrochloride, calcium, vit. D, proton pump inhibitors, steroidal skin creams, antibiotics	NO	NO
P7	Severe chronic GI Discomfort with indigestion, bloating, heartburn, constipation. Feels tired all the time. Haemorrhoids. Chronic dry eyes. Chronic blocked nose. Chronic depression	Irritable bowel syndrome. Fatigue. Nose diaphragm needs operation. Depression. Allergies. Xeropthalmia. GERD[2]		lots of antibiotics in the past, proton pump inhibitors for GERD, laxatives for constipation, antihistamines for allergies, decongestants for blocked nose, antidepressants, eye drops xeropthalmia	decongestants, proton pump inhibitors, antidepressants, eye drops, antihistamines, laxatives and antacids	advised to avoid all foods causing him GI discomfort	NO

[1] GERD: Gastroesophageal reflux disease
[2] GERD: Gastroesophageal reflux disease

P8	Allergic rashes all over his body. Strong chronic GI discomfort with constipation, bloating and indigestion. Blocked nose. Chronic headaches and joint pains. Tired all the time	A brain abscess created from tooth virus accompanied by compulsions. Part of his scull damaged. Hepatitis (liver enlarged) from medication for the abscess. .	Removal of abscess and replacement of part of the scull	Very strong antibiotics, corticosteroids for allergies, drugs to control compulsions, painkillers, antacids for stomach discomfort and laxatives for constipation	after the operation: antacids, antihistamines painkillers and laxatives	NO	NO
P9	Obesity. Chronic GI discomfort. Chronic blocked nose. Chronic musculoskeletal pains. Mouth ulcers. Lip herpes. Bleeding gums. Chronic insomnia. Unhappy	NA		NOT VISITED A DOCTOR	antacids	NA	NA
P10	Chronic strong headaches. Chronic GI problems with bloating, pain, indigestion and diarrhoea. Avoids most foods. Chronic blocked nose and snoring. Bleeding gums	Allergies. Uterine fibroids. Irritable bowel syndrome. Nose Diaphragm needs operation	Hysterectomy	Painkillers for headaches, HRT after hysterectomy, antihistamines and decongestants for blocked nose, antacids for stomach	painkillers, antihistamines, decongestants and antacids	Advised to avoid foods that cause diarrhoeas	NO

P11	Frequent colds. Dizziness. Chronic headaches. Irritability, pains, bloating, mood swings before period. Tired all the time. Feels 'down' and lots of stress	Vertigo. Premenstrual Syndrome. Fatigue. Low immune function		Vaccination for influenza, painkillers for headaches, Prochlorperazine for Vertigo	painkillers, prochlorperazine for vertigo	NO	NO
P12	Obesity. Chronic headaches. Chronic musculoskeletal and joint pains. Bleeding gums. High blood pressure	Hypertension. Diabetes II. Gout. Arthritis		ACE inhibitors, Hypoglycaemic drugs (metformin), NSAIDs for arthritis. Medicine for Gout	NSAIDs. Metformin. ACE inhibitors	NO	NO
P13	No specific health problems apart from feeling tired, getting aged, and occasional mild pains and numbness on feet	Discopathy. Coronary artery disease (suspected)		NO	NSAIDs	NO	NO
P14	Hands trembling. Musculoskeletal pains and stiffness. Kidney pain. Dizziness. Declining memory. Insomnia. Depressed after medical diagnosis for Parkinson's disease	Different doctors made different diagnoses: Parkinson's disease. Herpes. Neck syndrome. Kidney stones. Some told him it is all in his mind		Medication for Parkinson's disease, NSAIDs for musculoskeletal pains, cortisone for herpes, sleeping drugs for insomnia, antidepressants	NSAIDs for pains, and sleeping drugs	NO	NO

P15	Severe chronic GI problems with heartburn, bloating and constipation. Feels tired all the time. Moderate depression. Skin discolouration. Breast pains. Musculoskeletal pains. Kidney pains. Bleeding gums. Cannot lose weight	Calcifications in breasts. Arthritis. Versicolour pytiriasis. Gingivitis. Irritable bowel syndrome. Gastritis.		NSAIDs for pains and arthritis, laxatives for constipation, proton pump inhibitors and antacids for gastritis, steroidal skin creams for pytiriasis. Advised to visit dentist for gingivitis	laxatives, antacids, steroidal creams and NSAIDs	advised to avoid foods that cause her GI problems	NO
P16	Depressed. Chronic musculoskeletal pains. Chronic constipation. Skin rashes, runny nose, sneezing. Lethargy. Feels tired all the time	Small pituitary microadenoma. High prolactin levels. Depression. Allergies		antidepressants, painkillers, NSAIDs, laxatives for constipation, antihistamines for allergies	painkillers, NSAIDs, laxatives and antihistamines	NO	NO
P17	Chronic respiratory discomfort. Chronic GI problems with heartburn and indigestion. Frequent urinations. Hair falling.	Allergic asthma. Heart emphysema. Gastritis		corticosteroids for asthma, antibiotics for colds once yearly, proton pump inhibitors and antacids for gastritis	Corticosteroids and other bronchodilators, proton pump inhibitors, antacids, and antihistamines	NO	NO

P18	Skin rashes and spots. Chronic GI problems with heartburn, bloating and indigestion. Blocked nose. Physical and psychological premenstrual symptoms. Musculoskeletal stiffness. Skin rashes. Runny nose, itchy eyes. Frequent cysts under skin	Psoriasis. Pityriasis. Diaphragm needing operation. Gastritis. Skin virus infections. Allergies. Premenstrual syndrome		steroidal creams for allergic skin rashes, antibiotics for cysts, proton pump inhibitors for gastritis and indigestion, antihistamines for allergies	steroidal creams, antibiotics, proton pump inhibitors, antihistamines	NO	NO
P19	Chronic GI discomfort and constipation. Chronic musculoskeletal pains. Strong premenstrual symptoms. Skin rashes, itchy eyes, runny nose	Precancerous cells in PAP test. Allergies. Premenstrual Syndrome. Gastritis		medication for precancerous condition, NSAIDs for pains, antihistamines for allergies, laxatives for constipation and antacids for stomach discomfort	NSAIDs, antihistamines, laxatives, antacids	NO	NO
P20	Severe chronic GI problems with constipation, indigestion, bloating and heartburn. Strong premenstrual symptoms. Haemorrhoids. Chronic bleeding gums and mouth ulcers. Dizziness. Oedema. Heavy legs	Irritable bowel syndrome. Gastritis. GERD[1]. Premenstrual Syndrome		Painkillers for Premenstrual Syndrome, laxatives for constipation, proton pump inhibitors and antacids for GERD and gastritis.	painkillers, laxatives, proton pump inhibitors, antacids	advised to avoid foods that cause spastic bowel	NO

[1] GERD: Gastroesophageal reflux disease

P21	Skin whitish plagues. Flaky hair skin. Ear infections and ringing. Frequent throat infections. Chronic GI problems with indigestion and constipation. Chronic allergies. Fatigue. Insomnia	Psoriasis. Tonsillitis. Tinnitus. Irritable bowel syndrome. Stress. Allergies		cortisone for tinnitus, antibiotics for tonsillitis and ear infections, antacids for stomach and laxatives for constipation, antihistamines for allergies, sleeping drugs for insomnia	Anti-flu drugs, antibiotics, antacids, laxatives, antihistamines, sleeping pills	iron supplements, calcium in pregnancy	NO
P22	Chronic skin rash. Frequent throat infections. Insomnia. Fatigue. Unstable body temperature. Blurred vision. Dizziness. Food cravings. Stomach discomfort. Falling hair. Musculoskeletal pains	Diabetes II. Eczema. Tonsillitis. Fatty liver. High liver enzymes. Irritable bowel syndrome		antibiotics for tonsillitis, steroidal creams for eczema, hypoglycaemic drugs (metformin), antacids for stomach problems, NSAIDs for pains, sleeping drugs for insomnia	antibiotics, steroidal creams, hypoglycaemic drugs (metformin), antacids, NSAIDs, sleeping drugs	NO	NO
P23	Lots of moles. Chronic GI problems with heartburn, bloating, indigestion and constipation. Chronic musculoskeletal pains and stiffness. Difficult to urinate. Chronic allergies. Strong physical and psychological premenstrual symptoms. Mouth ulcers. Leg oedema. Fatigue. Frequent throat infections. Blocked nose	GERD. Gastritis. Arthritis. Nose diaphragm needs operation. Allergies. Premenstrual Syndrome	several small operations to remove moles	Proton pump inhibitors and antacids for GERD and Gastritis, nose steroidal sprays and anticongestants, laxatives for constipation, antihistamines for allergies, NSAIDs for arthritis, painkillers for premenstrual syndrome	Proton pump inhibitors, antacids, nose steroidal sprays and anticongestants, laxatives, antihistamines, NSAIDs, painkillers	advised to avoid all foods that cause GI problems	NO

P24	Chronic teeth problems. Strong chronic migraines. Chronic GI problems with constipation, and indigestion. Chronic musculoskeletal pains. Chronic insomnia. Nausea in travelling. Frequent fungus infections. Vaginal dryness. Frequent colds. Psychosomatic tendencies	Breast Cancer, Osteopenia, Fibroids, Periodontal disease, Arthritis	left breast and 12 lymph nodes removed, induced menopause	chemotherapy and radiotherapy after tumour removed, painkillers for migraines NSAIDs for arthritis, corticosteroids for fungi, antacids for stomach and laxatives for constipation, antibiotics for infections, sleeping pills for insomnia	antacids, painkillers, NSAIDs, laxatives, sleeping pills	NO	NO
P25	Severe varicose veins. Face swelling. Breathlessness. Weight increase. Chronic musculoskeletal pains with cramps and stiffness. Chronic strong headaches and face pains. Allergic rashes and dysphoria. Chronic GI problems with indigestion bloating and heartburn. Chronic insomnia. Haemorrhoids. Oedema. Fatigue	Hashimoto's thyroiditis, degenerative disc disease, face neuralgia, sinusitis, osteopenia, allergies. GERD	operated twice for face pains,	NSAIDs for all pains (face, musculoskeletal, headaches), antibiotics after the operations, anti-histamines for allergies, antacids and bowel relaxing drugs, proton pump inhibitors for GERD, sleeping pills for insomnia	NSAIDs, painkillers, antacids, antihistamines, proton pump inhibitors, sleeping pills	NO	NO
P26	Musculoskeletal pains, stiffness, and cramps. Thread veins on legs. Chronic bowel problems with bleeding. Lethargy from prescribed medication, headaches, catarrh, heavy menstruation, fatigue, premenstrual physical and psychological symptoms. Oedema	0steoporosis. 0steoarthritis with joint and disc degeneration. Calcifications. Chronic ulcerative colitis. Irritable bowel syndrome. 0varian cysts. Premenstrual		anti-inflammatory medication for ulcerative colitis (mesalazine), hormonal treatment for ovarian cyst, calcium for osteoporosis, painkillers for headaches, NSAIDs for osteoarthritis	aspirin and other painkillers, drugs for sinus, eye creams, NSAIDs, mesalazine, calcium	NO	NO

		syndrome					
P27	panic attacks, palpitations, phobias, stress, insomnia, GI problems with constipation and bloating and heartburn, haemorrhoids, frequent urinations, urine infections, lots of mucus, allergies, frequent migraines, nausea, loss of concentration, mouth ulcers, post natal depression	Irritable bowel syndrome. Stress. Cystitis. Allergies	caesarean section	antidepressants for phobias and panics, sleeping pills for insomnia, laxatives for constipation, anti-emetics for nausea, antacids for stomach, antibiotics for infections, antihistamines for allergies	painkillers, laxatives, antidepressants, sleeping pills, anti-emetics, antacids, antibiotics, antihistamines	NO	NO
P28	Very strong and frequent headaches, chronic GI discomfort with bloating, heartburn and constipation, musculoskeletal pains, haemorrhoids, mild depression, hot flushes, irritability, frequent lip herpes, fungi, fatigue, dizziness, lots of work stress	Hypertension. Hypercholesterolemia. Fatty liver, high liver enzymes. Spine vertebrae and disc degeneration. Menopause		ACE inhibitors for hypertension, statins for cholesterol, strong painkillers for headaches, NSAIDs for pains.	ACE inhibitors, statins, strong painkillers, NSAIDs	advised to avoid salt	NO

P29	frequent strong musculoskeletal pains with cramps, numbness and stiffness, insomnia, dry cough continuously, poor teeth, flaky nails, skin rashes, lip herpes, mild depression,	Severe osteoporosis with high fracture risk. Hypercholesterolemia. Fungi infections. Eczema. Arthritis		Aledronate and calcium for osteoporosis, antibiotics and steroids for fungi, NSAIDs for arthritis, statins for cholesterol, sleeping pills for insomnia, steroidal creams for skin rashes and herpes	Aledronate, , calcium, steroids, NSAIDs , statins, sleeping pills, steroidal creams	NO	NO
P30	strong migraines with vomiting, obesity, irregular menstruation with very heavy flow, palpitations, low iron, musculoskeletal pains and stiffness, frequent colds, GI problems with indigestion and diarrhoeas, strong premenstrual physical and psychological symptoms, allergies, mild haemorrhoids, insomnia, chronic fatigue, oedema	Ppolycystic ovaries. Premenstrual Syndrome. Insulin Resistance. Arthritis and spine vertebrae degeneration. High testosterone. GERD. Allergies		Hormonal treatment for polycystic ovaries, sleeping pills for insomnia, frequent antibiotics for colds, painkillers and NSAIDs for athritis, antihistamines for allergies, proton pump inhibitors for GERD. Metformin for Insulin Resistance	sleeping pills, frequent antibiotics, painkillers, NSAIDs, antihistamines, proton pump inhibitors. Metformin	iron supplements	NO
P31	Obesity, daily bad cough with dyspnoea and thick mucus. Bad varicose veins. Strong chronic musculoskeletal pains. Skin rashes. Frequent colds. Strong premenstrual physical and psychological symptoms. Stress. GI problems with indigestion, bloating and heartburn. Lots of cravings. Oedema. Fatigue	History of tuberculosis. Osteoarthritis with extended calcifications. Chronic bronchitis. Diabetes II. Hypercholesterolemia. High triglycerides. Premenstrual		antibiotics for colds, NSAIDs for arthritis and pains, corticosteroids for dyspnoea, steroidal creams for rashes, antacids for stomach, proton pump inhibitors for GERD	antibiotics, NSAIDs, corticosteroids, steroidal creams, antacids, proton pump inhibitors	NO	NO

		Syndrome.					
P32	fatigue, strong chronic musculoskeletal pains, insomnia, very frequent urinations, stomach discomfort, allergies in spring,	Thyroid nodes. Hypercholesterolemia. GERD. Arthritis. Allergies	thyroid removed	thyroxin, statins for hypercholesterolemia NSAIDs and glucosamine for arthritis and pains, sleeping pills for insomnia, Proton pump inhibitors for GERD, Antihistamines for allergies	thyroxin, statins, NSAIDs, glucosamine, sleeping pills, Proton pump inhibitors, Antihistamines	NO	NO
P33	Fatigue. Chronic allergies. Blocked nose continuously. Weak memory. Poor sleep with nightmares. Sleepy all day. Several boils on his body. Heavy legs. GI problems with indigestion bloating and heartburn. Frequent colds that last long. Frequent urinations. Eating disorders. Chronic musculoskeletal pains and stiffness. Tension headaches.	Depression. Allergies. Nose Diaphragm needs operation. Irritable bowel syndrome. Gastritis		antidepressants, antihistamines for allergies and blocked nose, antacids for stomach discomfort, NSAIDs for pains	antihistamines, antacids, NSAIDs	NO	NO

P34	Strong chronic joint pains and stiffness, swelled ankles that prevent him from walking, skin rashes, chronic GI discomfort, insomnia, blocked nose, frequent colds, bleeding gums,	Reactive Inflammatory Arthritis caused by virus. Nose diaphragm needing operation	joint operation	NSAIDs for arthritis and pains, antacids for stomach discomfort, sleeping pills for insomnia, antihistamines for blocked nose	NSAIDs, antacids, sleeping pills, antihistamines	NO	NO
P35	frequent urinations, chronic knee pain and stiffness, mild headaches, poor sleep, mouth ulcers	Osteoarthritis. Hypercholesterolemia.		statins for hypercholesterolemia, NSAIDs for Osteoarthritis	Statins, NSAIDs	NO	NO
P36	chronic skin rashes, back pain and stiffness, migraines, double vision after accident, boils inside nose, oedema on legs	Hypertrophic arthritis with degenerative bone changes. Eczema		steroidal ointment for nose boils, steroidal creams for eczema, NSAIDs for arthritis, painkillers for migraines	Steroidal ointments and creams, NSAIDs, painkillers.	NO	NO
P37	Chronic joint pains with numbness and stiffness. Dizziness. Pain and swelling in the liver area, frequent urinations. Chronic GI problems with bloating heartburn and indigestion. Runny itchy eyes. Heavy chest with yellow mucus. Fungi in genital area. Oedema on fingers. Obesity	Multiple uterine fibroids. Vertigo. Cystitis. Gastritis. GERD. Arthritis. Hypercholesterolemia. Mild eosiniphilia		NSAIDs for arthritis and pains, Prochlorperazine for vertigo, antibiotics for cystitis and mucus, steroidal creams for fungi, steroidal eye drops, proton pump inhibitors for GERD and gastritis. antacids for stomach, statins for cholesterol	NSAIDs, Prochlorperazine, antibiotics, steroidal creams, steroidal eye drops, proton pump inhibitors, antacids, statins	NO	NO

P38	chronic GI problems with constipation and indigestion, fatigue, frequent urinations, chronic allergies, fungi, frequent infections, teeth stone forming, varicose veins, insomnia, chronic musculoskeletal pains and stiffness, oedema, blocked nose, dizziness	Virus infections. Irritable bowel syndrome. Nose diaphragm needing operation. Arthritis. Allergies. Vertigo		NSAIDs for arthritis and pains, laxatives for constipation, antacids for stomach, frequent use of antibiotics for infections, antihistamines for allergies and blocked nose, Prochlorperazine for vertigo	NSAIDs, painkillers, antacids, laxatives, antibiotics, antihistamines, prochlorperazine	NO	NO
P39	Hair severely falling. Fatigue. Numbed gums, fungus infections and blocked nose after cosmetic jaw surgery. GI problems with constipation and indigestion. Extremely frequent urinations. Poor nails. Haemorrhoids. Palpitations. Musculoskeletal pains and stiffness. Frequent colds. Insomnia. Lots of stress from her falling hair	Irritable bowel syndrome. Alopecia. Stress.	Cosmetic jaw surgery	Cortisone for hair falling, antibiotics for infections, laxatives for constipation, antacids for stomach, NSAIDs for pains, antidepressants, sleeping pills for insomnia	antibiotics, laxatives, antacids, painkillers, NSAIDs, sleeping pills	NO	NO
P40	Stressful. Chronic insomnia. Chronic fatigue. Eating disorders. Chronic constipation and indigestion. Bleeding gums. Falling hair. Hearing loss. Smell loss. Hot flushes. Varicose veins. Haemorrhoids. Oedema. Chronic joint pains and stiffness. Gallbladder pains	Hormonal imbalance. Anaemia. Gingivitis. Menopause. Osteopenia. Cervicitis. Endometriosis. Chronic acalculus cholecystitis. Fatty liver.		Hormonal therapy for endometriosis, sleeping pills for insomnia, antacids for stomach, laxatives for constipation, NSAIDs for pains, antibiotics for infections,	Sleeping pills, antacids, laxatives, NSAIDs, painkillers.	Iron supplements	NO

P41	Chronic GI problems with indigestion. Frequent lip herpes in stress. Chronic musculoskeletal pains and stiffness. Overweight. Frequent bronchitis. Poor memory. Cravings for sweets	Hypercholesterolemia. Hypertension. Osteoarthritis. Stress. .		Statins for hypercholesterolemia, ACE inhibitors for hypertension, antibiotics for bronchitis, aspirin (for prevention), proton pump inhibitors and antacids for stomach	statins, ACE inhibitors, antibiotics, aspirin, proton pump inhibitors, antacids	NO	NO
P42	Severe chronic GI problems with constipation bloating, heartburn and indigestion. Chronic musculoskeletal pains, cramps and stiffness. Snoring. Loss of balance. Bleeding gums. Chronic leg oedema. Poor memory. Chronic fungus infections. Varicose veins	Irritable bowel syndrome. GERD. Vertigo. Arthritis. Gingivitis. .		Laxatives for constipation, antacids for stomach, proton pump inhibitors for GERD, NSAIDs for arthritis and pains, Prochlorperazine for vertigo, aspirin for prevention, antibiotics for fungus infections	Laxatives, antacids, proton pump inhibitors, NSAIDs, prochlorperazine, aspirin	NO	NO
P43	Severe chronic GI problems with constipation, reflux and indigestion. Fatigue. Sweating. Throat swelling. Strong chronic migraines. Chronic musculoskeletal pains, stiffness and numbness. Chronic respiratory problems. Frequent fungus infections. Insomnia. Oedema. Mouth ulcers. Haemorrhoids. Easy weight gain. Depression. .	Goiter. Osteopenia. Osteoarthritis. Cystitis. Allergies. Hypercholesterolemia. Menopause. Breast cysts. Asthma. GERD	Thyroid removed	Painkillers for headaches, NSAIDs for arthritis and pains, laxatives for constipation, proton pump inhibitors and antacids for GERD, Thyroxin, steroidal sprays for asthma, antibiotics and steroids for fungus infections, sleeping pills for insomnia, HRT for menopausal symptoms, antihistamines for allergies.	Painkillers (daily), NSAIDs, laxatives, proton pump inhibitors, antacids, thyroxin, anti-asthmatic sprays, antibiotics, steroidal creams, sleeping pills, HRT, antihistamines	Calcium for osteoporosis	NO

P44	Chronic GI problems and food intolerances with frequent diarrhoea. Chronic musculoskeletal pains with cramps and stiffness. Chronic ankle oedema. Chronic respiratory problems. Fatigue. Poor memory. Some hearing loss.	Stomach ulcer. Lactose intolerance. Osteoarthritis. Severe hypertension. Allergies. Irritable bowel syndrome		ACE inhibitors for hypertension, NSAIDs for pains, proton pump inhibitors and antacids for stomach	ACE inhibitors, NSAIDs and painkillers, proton pump inhibitors, antacids	advised to avoid salt and foods that cause her diarrhoea	NO
P45	Very strong and frequent migraines all her life. Chronic musculoskeletal pains with cramps and stiffness. Frequent urinations with mild incontinence. Chronic GI problems with constipation and indigestion. Chronic breast tenderness and pain. Frequent urine infections. Frequent fungi infections. Throat infections. Severe varicose veins	Osteoporosis. Osteoarthritis. Cystitis. Throat cords nodes. Gastritis. Fibrocystic breast disease	injections for varicose veins	Antibiotics for infections, cortisone for fungi, aledronate with calcium and vit. D for osteoporosis, laxatives for constipation, antacids and proton pump inhibitors for gastritis, painkillers and NSAIDs for migraines and arthritis	antibiotics, cortisone, aledronate, laxatives, antacids, proton pump inhibitors, painkillers, NSAIDs	Calcium supplements for osteoporosis	NO
P46	Severe fatigue. Loss of concentration. Poor memory. Chronic severe respiratory problems. Panic attacks. Severe chronic GI problems with diarrhoeas, bloating and indigestion. Lethargy. Strong musculoskeletal pains and stiffness. Frequent fungus infections. Breast lumps. Frequent urinations. Frequent lip herpes. Bleeding gums. Strong migraines. Emotional sensitivity and frustration	Chronic asthma with lungs having very low capacity due to permanent damage from chronic asthma. Irritable bowel syndrome. Fibrocystic breast disease. Chronic fatigue syndrome. Stress.		NSAIDs and other painkillers for osteoarthritis and migraines, corticosteroids for asthma, bowel antispasmodic drugs, proton pump inhibitors and antacids for stomach, antidepressants for panic attacks and frustration, antibiotics for fungus infections, .	NSAIDs, painkillers, corticosteroid inhalers, antispasmodic drugs, proton pump inhibitors, antacids, antidepressants, antibiotics	NO	NO

		Osteoarthritis. Gingivitis.					
P47	Severe chronic GI problems with constipation bloating, heartburn and indigestion. Chronic musculoskeletal pains, cramps and stiffness. Migraines. Heavy menstruation. Dizziness. Allergies. Fungus infections. Frequent lip herpes. Haemorrhoids. Oedema. Frequent colds	Gastritis. Helicobacter Pylori infection. Irritable bowel syndrome. Arthritis. Endometriosis. Vertigo. Allergies.		Antibiotics for fungus infections, proton pump inhibitors for gastritis, steroidal creams for fungi, flu vaccine, Prochlorperazine for vertigo, NSAIDs for pains, antihistamines for allergies	antibiotics, proton pump inhibitors, steroidal creams, prochloroperazine, NSAIDs, painkillers, antihistamines	iron supplements	NO
P48	Depression. Confused personality. Fatigue. Fungus infections. Insomnia.	Depression.		Antidepressants and other psychotic drugs, sleeping pills for insomnia, corticosteroids for fungi	Antidepressants, psychotic drugs, sleeping pills, conrticosteroids.	NO	NO

P49	Chronic fatigue. Depression. All body oedema. Palpitations. GI problems with constipation. Frequent urinations. Strong joint and muscle pains and stiffness. Frequent colds. Blocked nose. Dizziness	Chronic fatigue syndrome		Antidepressants, antibiotics for colds twice yearly, NSAIDs for pains Prochlorperazine for vertigo, laxatives for constipation, antihistamines for blocked nose	antidepressants, NSAIDs, prochlorperazine, laxatives, antihistamines .	NO	NO
P50	Severely falling hair. Chronic GI problems with constipation, heartburn, bloating and indigestion. Urine incontinence. Chronic fungus infections. Frequent colds. Blocked nose. Skin rashes. Varicose veins. Swelled legs. Chronic musculoskeletal pains. Food intolerances. Breast cysts. Insomnia. Fatigue. Cravings. Dry eyes	Irritable bowel syndrome. Gastritis. GERD. Osteoarthritis. Tonsillitis. Eczema. Hypertension. Allergies	operated for urine incontinence .	ACE inhibitors, eye drops, NSAIDs for osteoarthritis, laxatives for constipation, proton pump inhibitors and antacids for stomach, steroidal creams for eczema, antihistamines for allergies, sleeping pills for insomnia, antibiotics for infections	ACE inhibitors, NSAIDs and painkillers, laxatives, proton pump inhibitors, antacids, steroidal creams, antihistamines, sleeping pills, antibiotics	multivitamin for falling hair, advised to avoid salt and foods causing intolerance	YES

APPENDIX 4

ANALYSIS OF CASE STUDIES FROM CLINICAL PRACTICE

PATIENTS' NUTRITIONAL TREATMENT SUCCESS

APPENDIX 4

PATIENT	PATIENTS' VIEW OF THEIR HEALTH	NUTRITIONAL MEDICINE DIAGNOSIS	AIMS OF TREATMENT	LENGTH OF TREATMENT WEEKS	MEANS OF TREATMENT	PATIENT'S COMMENTS AFTER TREATMENT	MY COMMENTS AFTER TREATMENT
P1	Feels tired all the time. Weight gain. Dehydrated. Chronic constipation. Mood swings	Systemic toxicity. Liver under functioning. Compromised immunity. Suppressed hormonal function. Eliminatory organs seriously compromised. Internal deposition of toxins. Severe chronicity	To promote detoxification, open eliminatory routes, enhance immune function, enhance liver function, restore mineral deficiencies/imbalances, and restore hormonal balance. Open eliminatory routes. Reverse chronicity	30	Diet, nutritional supplements, coffee enemas, lifestyle changes, liver cleanse, liver support	Feels great, full of energy, no constipation, much better psychological state	Patient completed her therapy and assured me that she is very happy with her new way of diet and lifestyle and that she intends to continue like this for the rest of her life. She did not manage, however, to persuade her family to follow. TRAINED
P2	Feels tired all the time. Severe hair falling. Chronic GI[1] discomfort with bloating, heartburn and indigestion. Chronic musculoskeletal pains. Varicose veins. Chronic unstable body temperature. Leg bruises. Skin rashes	Metabolic imbalances (calcium mishandling, blood sugar instability, fat mishandling). Liver malfunction. Adrenal exhaustion. Immune imbalanced. Weak circulatory system. GI dysbiosis. Chronicity	To promote detoxification, restore metabolic functions, enhance adrenal, immune and circulatory systems function, and restore bowel flora and mineral deficiencies / imbalances. Reverse chronicity	15	Diet, nutritional supplements lifestyle changes	Feels much better, high energy, most health problems cured	Patient completed her therapy and assured me that she intends to continue with her naturopathic diet and healthy lifestyle for the rest of her life. She did not manage to persuade her family to follow her. TRAINED

[1] GI: Gastrointestinal

P3	Chronic GI problems with constipation, bloating and indigestion. Falling hair, low moods	GI dysbiosis. Liver toxicity. Mineral deficiencies/ excesses. Metabolic imbalances	To promote detoxification, restore bowel flora and mineral deficiencies/imbalances, enhance liver function	13	Diet, nutritional supplements lifestyle changes	Feels very well, stomach and bowels cured, iron levels dropped significantly	Patient did not completely finish her therapeutic programme. Her serious genetic disease, thalassaemia and her weekly blood transfusions was a major factor for abandoning her therapy.
P4	Chronic respiratory discomfort. Cannot become pregnant. Skin rashes. Dry eyes. Chronic GI problems with bloating, indigestion heartburn and constipation, Chronic headaches	Severe dysbiosis. Enterohepatic route malfunctioning. Mineral deficiencies. Immune system seriously compromised. Eliminatory organs compromised. Internal deposition of toxins. Weak hormonal system. Chronicity	To promote detoxification, open eliminatory routes, restore bowel flora and mineral deficiencies/imbalances, and enhance immune and hormonal systems function. Reverse chronicity	20	Diet, nutritional supplements, coffee enemas, liver cleanse, lifestyle changes	Most problems solved: no asthma attacks, no allergic rhinitis, no headaches, and no bowel problems. Patient became pregnant by the end of treatment	The patient completed her therapy and was very happy to get rid of all asthma attacks and stopped using anti-asthmatic inhalers. She became pregnant after 5 months of treatment, (she had tried for a number for years for a second baby without success). After the delivery of her baby she came back to the clinic a few times to get advises for her and her children. She applies her naturopathic diet and lifestyle to her whole family. TRAINED
P5	Bowel severely ruptured by accidental gunshot. Feels tired all the time. Indigestion, bloating, heartburn. Arrhythmias. Skin rashes, runny nose. Depressed. Can eat only a restricted selection of foods, chooses to be socially isolated, unhappy	Immune seriously compromised. Severe dysbiosis. Liver toxicity. Emotional imbalance	To promote detoxification, enhance immune function, enhance liver function, restore bowel flora, restore emotional balance	15	Diet, nutritional supplements, lifestyle changes	Feels wonderful, can eat all kinds of food without problem, no allergies, no bowel problems, no more adhesions, no more depression, arrhythmias improved	Patient completed his therapeutic programme, which focused predominantly on enhancing the immune system, which helped him have a normal life. He could eat all foods he avoided for many years before. He stated as very happy with his naturopathic diet and lifestyle and intends to continue for the rest of his life. He persuaded many of his friends and relatives to visit the clinic. TRAINED

P6	Chronic musculoskeletal pains. Chronic GI discomfort with bloating and indigestion. Water retention. Skin rashes. Frequent urine infections	GI dysbiosis. Liver toxicity. Lymphatic congestion. Chronicity	To promote detoxification, restore bowel flora, enhance lymphatic function. Reverse chronicity	17	Diet, nutritional supplements, lifestyle changes	Feels lighter, more energetic, no pains	Patient completed her therapeutic programme feeling healthier and stronger. She stated that she loves her new way of diet and lifestyle and believes that she will continue for the rest of her life. Her family adopted many of the new habits. TRAINED
P7	Severe chronic GI Discomfort with indigestion, bloating, heartburn, constipation. Feels tired all the time. Haemorrhoids. Chronic dry eyes. Chronic blocked nose. Chronic depression	Severe dysbiosis. Liver toxicity. Nervous system and emotional body affected. Eliminatory organs compromised. Chronicity	To promote detoxification, open eliminatory routes, restore bowel flora, rebalance metabolic functions, and restore nervous and emotional balance. Reverse chronicity	10	Diet, nutritional supplements, lifestyle changes	Feels great, bowels work perfectly, no more fatigue, no more blocked nose, sleeps very well	Patient abandoned his therapeutic programme a few weeks before finishing stating that he could not afford the cost of the nutritional supplements. No more information.
P8	Allergic rashes all over his body. Strong chronic GI discomfort with constipation, bloating and indigestion. Blocked nose. Chronic headaches and joint pains. Tired all the time	Seriously compromised immune system. GI dysbiosis. Severe mineral deficiencies. Adrenal exhaustion. Chronicity	To promote detoxification, enhance immune function, restore bowel flora, enhance adrenal function, and restore deficiencies, imbalances. Reverse chronicity	8	Diet, nutritional supplements, lifestyle changes	Feels great, no more constipation, no bloating, no indigestion, no musculoskeletal problems, no blocked nose, and no fungus infections. His doctor was very much impressed with his improvement.	Patient stopped half way of his treatment because of his heavy workload; however he stated that he will do his best to continue following the basic naturopathic principles and persuaded his brother to come for a treatment. According to information from his brother he did not abandon his basic naturopathic principles. TRAINED

P9	Obesity. Chronic GI discomfort. Chronic blocked nose. Chronic musculoskeletal pains. Mouth ulcers. Lip herpes. Bleeding gums. Chronic insomnia. Unhappy	Dysbiosis. Liver toxicity. Metabolic imbalances (blood sugar instability),. Zinc deficiency. Lymphatic congestion.	To restore bowel flora, promote detoxification, stabilise blood sugar levels, enhance lymphatic function, restore deficiencies	20	Diet, nutritional supplements, lifestyle changes, liver cleanse	Feels very well, lost 16kg, no GI problems, blocked nose improved, no musculoskeletal pains, no mouth ulcers, no lip herpes, no bleeding gums, very good sleep, fungus infections reduced.	Patient completed his therapeutic programme with excellent results. He applied his naturopathic diet and lifestyle to himself and his family. TRAINED
P10	Chronic strong headaches. Chronic GI problems with bloating, pain, indigestion and diarrhoea. Avoids most foods. Chronic blocked nose and snoring. Bleeding gums	Liver toxicity. GI dysbiosis. Metabolic imbalances (calcium dumping, blood sugar instability, sodium potassium imbalance). Zinc deficiency. Eliminatory organs compromised. Chronicity	To promote detoxification, open eliminatory routes, restore bowel flora, enhance liver function, and restore metabolic imbalances and mineral deficiencies/imbalances. Open eliminatory routes. Reverse chronicity	6	Diet, nutritional supplements, lifestyle changes	feels great, no more headaches, no bowel problems, no fatigue, no more joint pains	Patient stopped her therapy half the way, after she felt better. I explained that her symptoms might recur but she refused to continue due to the high costs of supplements. However, she applied several of the naturopathic principles to her family. TRAINED
P11	Frequent colds. Dizziness. Chronic headaches. Irritability, pains, bloating, mood swings before period. Tired all the time. Feels 'down' and lots of stress	Adrenal exhaustion. Mineral imbalances. Liver toxicity. Compromised immunity.	To promote detoxification, enhance adrenal function, restore deficiencies/imbalances	10	diet, nutritional supplements, lifestyle changes	feels very well, lighter, less stressed, she has made radical changes to her diet and lifestyle	Patient completed her therapeutic programme and left the clinic a new person. She managed to impose changes to her lifestyle that helped reduced her stress and applied the naturopathic principles to her husband and children. TRAINED

P12	Obesity. Chronic headaches. Chronic musculoskeletal and joint pains. Bleeding gums. High blood pressure	Liver toxicity. Metabolic imbalances (sugar instability, calcium mishandling). Mineral imbalances. Adrenal exhaustion. Kidney malfunctioning. Circulatory weakness. Eliminatory organs compromised. Chronicity	To promote detoxification, open eliminatory routes, enhance metabolic functions, enhance adrenal, circulatory and kidney function, and restore mineral imbalances. Reverse chronicity	8	diet, nutritional supplements, lifestyle changes	feels great, no pains, blood pressure normal without drugs	Patient did not finish his nutritional therapy due to his frequent flights, but significantly changed his diet and lifestyle. Most importantly he lost weight, stopped the antihypertensive pills and had no more gout incidents. TRAINED
P13	No specific health problems apart from feeling tired, getting aged, and occasional mild pains and numbness on feet	Liver toxicity. Calcium mishandling. Fat mishandling. Mineral deficiencies	To promote detoxification, enhance immune system function, restore metabolic function, particularly calcium mishandling and deficiencies	18	Diet, nutritional supplements, lifestyle changes, liver cleanse	feels much better, more energetic, much less joint pains	Patient believed that he had no serious health problems and he visited the clinic for a general detoxification programme which he completed. He was very happy with the new dietary and lifestyle. TRAINED
P14	Hands trembling. Musculoskeletal pains and stiffness. Kidney pain. Dizziness. Declining memory. Insomnia. Depressed after medical diagnosis for Parkinson's disease	Severe toxicity from chemicals. Metabolic imbalances (calcium mishandling, fat mishandling, sodium/potassium imbalance). Mineral imbalances. Liver malfunctioning.	To promote detoxification, restore metabolic imbalances and mineral deficiencies, enhance liver function	24	diet, nutritional supplements, lifestyle changes	Feels very happy. Additional tests showed that the first diagnosis for Parkinson's disease was not correct. A more recent diagnosis demonstrated neck stenosis, calcium salts and degenerations	After six months of nutritional treatment on this basis led to a great improvement to his condition and his psychological state. The new diagnosis for calcium salts and degenerations in the neck vertebra are characteristics of the calcium dumping syndrome. In addition, the detailed case history had revealed that during his leisure time he was exposed to high quantities of toxic chemicals from fertilising and spraying without protective measures in his family farm. A further positive development was the adoption of the naturopathic principles by his whole family. TRAINED

P15	Severe chronic GI problems with heartburn, bloating and constipation. Feels tired all the time. Moderate depression. Skin discolouration. Breast pains. Musculoskeletal pains. Kidney pains. Bleeding gums. Cannot lose weight	GI dysbiosis. Liver toxicity. Metabolic imbalances (calcium mishandling). Mineral deficiencies. Immune compromised. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To restore bowel flora, open eliminatory routes, promote detoxification, enhance metabolic functions, restore deficiencies, and enhance liver and immune function. Reverse chronicity	14	diet, nutritional supplements, lifestyle changes	feels great, full of energy, happy, no more GI problems, no pains, no gingivitis, lost 9kgs	Patient completed her treatment, radically changing her diet and lifestyle habits. She was very happy to have become a new person. No information about the progress of her breast calcifications after she left. TRAINED
P16	Depressed. Chronic musculoskeletal pains. Chronic constipation. Skin rashes, runny nose, sneezing. Lethargy. Feels tired all the time	Adrenal exhaustion. Liver toxicity. Hormonal imbalance. Metabolic imbalances (blood sugar instability, calcium mishandling). Circulatory and kidney weakness. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To enhance adrenal function, promote detoxification, open eliminatory routes, restore metabolic imbalances, enhance circulatory and kidney functions. Reverse chronicity	14	diet, nutritional supplements, lifestyle changes	Feels great, no more depression, no allergies, no pains.	The patient completed the first part of her therapeutic programme with very good results. She stopped the antidepressants. She interrupted her programme a few times due to travelling for her work, but always went back. She promised not to abandon the naturopathic basis of her diet and lifestyle. TRAINED
P17	Chronic respiratory discomfort. Chronic GI problems with heartburn and indigestion. Frequent urinations. Hair falling.	Liver toxicity. Immune imbalanced. Mineral deficiencies. Kidney weakness. GI dysbiosis. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, enhance immune and kidney function, and restore bowel flora and mineral deficiencies. Reverse chronicity	17	diet, nutritional supplements, lifestyle changes	feels great, lighter, full of energy, no more asthma, no GI problems, no hair falling	Patient completed her therapy and was very happy, most importantly for getting rid from asthma attacks and extra weight. She applied her new diet and lifestyle to her whole family. TRAINED

P18	Skin rashes and spots. Chronic GI problems with heartburn, bloating and indigestion. Blocked nose. Physical and psychological premenstrual symptoms. Musculoskeletal stiffness. Skin rashes. Runny nose, itchy eyes. Frequent cysts under skin	GI dysbiosis. Liver malfunctioning. Metabolic imbalances (calcium mishandling, blood sugar instability). Lymphatic congestion	To promote detoxification, restore bowel flora, enhance metabolic functions, enhance immune and liver functions	9	diet, nutritional supplements, liver support, lifestyle changes	feels great, lost weight, no more GI problems, no more pains and stiffness, full of energy, no blocked nose, no PMS	Patient did not entirely complete her therapeutic programme because she got tired taking the supplements. However she was greatly benefited from the programme and promised not to abandon the naturopathic principles. TRAINED
P19	Chronic GI discomfort and constipation. Chronic musculoskeletal pains. Strong premenstrual symptoms. Skin rashes, itchy eyes, runny nose	High toxicity. Zinc deficiency. Metabolic imbalances (calcium mishandling). Imbalanced immune function. Weak nervous system. Liver malfunctioning. Weak hormonal system. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, enhance metabolic functions, restore deficiencies, and enhance immune, liver and hormonal functions. Reverse chronicity	15	diet, nutritional supplements, lifestyle changes	feels great, no more GI problems, no joint pains, no PMS	Patient completed her treatment, and was very happy to have solved most of her problems. Most importantly she became more relaxed with less frequent psychosomatic problems. Her son also visited the clinic for a nutritional therapy. TRAINED
P20	Severe chronic GI problems with constipation, indigestion, bloating and heartburn. Strong premenstrual symptoms. Haemorrhoids. Chronic bleeding gums and mouth ulcers. Dizziness. Oedema. Heavy legs	Severe GI dysbiosis. Enterohepatic route malfunctioning. Adrenal exhaustion. Weak circulatory system. Compromised immunity. Zinc deficiency. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, enhance adrenal, circulatory and immune functions, and restore deficiencies. Reverse chronicity	15	Diet, nutritional supplements, lifestyle changes, liver cleanse	she feels very well, all her problems cured (GI, circulatory, mouth, fungi)	Patient completed her therapy and was much better. She could eat all foods she avoided before and she applied the naturopathic principles to all her family. Noteworthy, when first came she was irritable and nervous. This characteristic was also greatly improved. TRAINED

P21	Skin whitish plagues. Flaky hair skin. Ear infections and ringing. Frequent throat infections. Chronic GI problems with indigestion and constipation. Chronic allergies. Fatigue. Insomnia	Severe dysbiosis. Enterohepatic route malfunctioning. Compromised immunity. Mineral deficiencies. Lymphatic congestion. Accumulated toxicity. Eliminatory organs compromised. Chronicity	To restore bowel flora, enhance immune and lymphatic functions, promote detoxification, open eliminatory routes, restore mineral deficiencies. Reverse chronicity	13	diet, nutritional supplements, lifestyle changes	feels great, full of energy, less stress, lost weight, no more GI problems, pain much better, sleeps very well	Patient did not entirely complete her therapeutic programme because she found the supplements very expensive. However she was greatly benefited from the programme and did not abandon the naturopathic principles. TRAINED
P22	Chronic skin rash. Frequent throat infections. Insomnia. Fatigue. Unstable body temperature. Blurred vision. Dizziness. Food cravings. Stomach discomfort. Falling hair. Musculoskeletal pains	Metabolic imbalances (poor fat handling, blood sugar instability, calcium mishandling). GI dysbiosis. Mineral deficiencies. Adrenals exhaustion. Liver and kidney malfunctioning. Lymphatic congestion. Eliminatory organs compromised. Chronicity	To promote detoxification, open eliminatory routes, enhance metabolic functions, restore deficiencies, and enhance liver, kidney, adrenal and lymphatic functions. Reverse chronicity	22	Diet, nutritional supplements, lifestyle changes, liver cleanse	feels great, full of energy, blood sugar level back to normal, no more cravings, no neck pains, lost weight	Patient, who has been diagnosed as diabetic, started the nutritional therapy under the pressure of his wife who accompanied him during the first two consultations. However, during the course of the treatment felt so well, that continued until the end with great pleasure. He became a new person and assured me that he will continue to follow the naturopathic principles. His whole family adopted also the new habits. TRAINED
P23	Lots of moles. Chronic GI problems with heartburn, bloating, indigestion and constipation. Chronic musculoskeletal pains and stiffness. Difficult to urinate. Chronic allergies. Strong physical and psychological premenstrual symptoms. Mouth ulcers. Leg oedema. Fatigue. Frequent throat infections. Blocked nose	GI dysbiosis. Adrenal exhaustion. Metabolic imbalances (calcium mishandling). Circulatory weakness. Liver malfunctioning. Nervous and emotionally imbalanced. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, enhance metabolic functions, restore bowel flora, enhance liver, adrenal and circulatory functions, and restore emotional and nervous balance. Reverse chronicity	18	diet, nutritional supplements, lifestyle changes	feels great, happy, lost weight, full of energy, no blocked nose	Patient felt very well, lots of energy, emotionally balanced, all her GI problems were cured, lost weight, no more oedema, no pains. She applied the naturopathic principles to her family and persuaded her husband to come for a nutritional therapy. TRAINED

P24	Chronic teeth problems. Strong chronic migraines. Chronic GI problems with constipation, and indigestion. Chronic musculoskeletal pains. Chronic insomnia. Severe nausea in travelling. Frequent fungus infections. Vaginal dryness. Frequent colds. Psychosomatic tendencies	Severe heavy metal toxicity (mercury). GI dysbiosis. Enterohepatic route and liver malfunctioning. Severe mineral deficiencies. Metabolic imbalances (sodium/potassium imbalance, calcium mishandling). Hormonal imbalances. Poor lymphatic function. Internal deposition of toxins. Eliminatory organs seriously compromised. Severe chronicity	To promote deep detoxification, open eliminatory routes, enhance liver function, restore mineral deficiencies/imbalances, restore metabolic imbalances and bowel flora, and enhance lymphatic and kidney function. Reverse chronicity	30	Diet, nutritional supplements, coffee enemas, liver cleanse, liver support, lifestyle changes	feels great, very happy, full of energy, no more nausea in travelling, can eat all foods she likes, no migraines, psychologically balanced	Patient was very happy with her new life, without serious health problems. For the first time in her life she gave to her family the pleasure to travel with them (travel caused her severe nausea in the past). She assured me that she will continue to live on these principles and also her family. TRAINED
P25	Severe varicose veins. Face swelling. Breathlessness. Weight increase. Chronic musculoskeletal pains with cramps and stiffness. Chronic strong headaches and face pains. Allergic rashes and dysphoria. Chronic GI problems with indigestion bloating and heartburn. Chronic insomnia. Haemorrhoids. Oedema. Fatigue	Liver malfunctioning. GI dysbiosis. Metabolic imbalances (calcium mishandling, blood glucose instability, sodium/potassium imbalance). Poor function of eliminatory organs. Compromised immunity. Hormonal imbalance. Weak circulatory. Mineral deficiencies. Eliminatory organs compromised. Internal deposition of toxins. Severe chronicity	To promote detoxification, open eliminatory routes, enhance metabolic functions, restore eliminatory organ function, enhance immunity, restore deficiencies, restore bowel flora. Reverse chronicity	18	diet, nutritional supplements, liver cleanse, lifestyle changes	feels great, no headaches, no face pains, no GI problems (eats all foods), no allergies, sleeps very well,	Patient felt so good after years of severe pains, allergies and bowel problems. She could eat now all foods and she could not believe that diet and lifestyle changes could make such a difference to her health. She also felt stronger to cope with the stresses of her life (she has a semi-paralysed grandchild). She completed her nutritional programme and promised to continue to live according to the naturopathic principles taught in the clinic. TRAINED

P26	Musculoskeletal pains, stiffness, and cramps. Thread veins on legs. Chronic bowel problems with bleeding. Lethargy from prescribed medication, headaches, catarrh, heavy menstruation, fatigue, premenstrual physical and psychological symptoms. Oedema	Liver toxicity. Enterohepatic route malfunctioning. Sever GI dysbiosis. Metabolic imbalances (calcium and fat mishandling, sodium/potassium imbalance, blood glucose instability). Hormonal imbalance. Compromised immunity. Internal deposition of toxins. Mineral deficiencies/imbalances. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To restore bowel flora, promote detoxification, open eliminatory routes, restore metabolic function, enhance immune function, and restore deficiencies. Reverse chronicity	13	diet, nutritional supplements, lifestyle changes	Patient was pain-free, and had no more colitis bouts. She gave up her medication completely without recurring symptoms. She was very happy because she could have a normal life.	Patient completed the largest part of her programme, because she had to leave the country. However, she was very happy to have solved most of her problems and reverse her osteoporosis. She was very happy with her new lifestyle. TRAINED
P27	Panic attacks, palpitations, phobias, stress, insomnia, GI problems with constipation and bloating and heartburn, haemorrhoids, frequent urinations, urine infections, lots of mucus, allergies, frequent migraines, nausea, loss of concentration, mouth ulcers, post natal depression	Severe dysbiosis. Liver toxicity. Adrenal exhaustion. Compromised immunity. Mineral deficiencies/imbalances. Nervous and emotional imbalances. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To restore bowel flora, promote detoxification, open eliminatory routes, open eliminatory routes, restore adrenal function, enhance immune function, restore deficiencies, and restore nervous and emotional balance. Reverse chronicity	8 weeks-pregnancy-14 weeks	Diet, nutritional supplements, lifestyle changes, liver cleanse	She feels great; she is a new person without panic attacks and emotionally balanced.	Patient felt much better with most of her problems resolved; however due to the fact that she became pregnant after 8 weeks of treatment she stopped the supplements but continued her naturopathic diet. She frequently called to ask for advises for her new baby. A year after she returned for a new therapeutic programme which she completed and was very happy to get rid of most of her problems. She applied the naturopathic principles to her family. TRAINED

P28	Very strong and frequent headaches, chronic GI discomfort with bloating, heartburn and constipation, musculoskeletal pains, haemorrhoids, mild depression, hot flushes, irritability, frequent lip herpes, fungi, fatigue, dizziness, lots of work stress	Serious metabolic imbalances (fat mishandling, calcium dumping, blood sugar instability). Poor lymphatic elimination. Hormonal imbalance. Mineral deficiencies especially zinc. GI dysbiosis. Nervous and emotional balance upset. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, restore metabolic functions, bowel flora and mineral deficiencies, and restore nervous and emotional balance. Reverse chronicity	14	diet, nutritional supplements, lifestyle changes	she feels much better, no more migraines, no stomach bloating, normal blood pressure (no drugs), much more energy	The patient was a very busy woman having the responsibility of a number of factories in Cyprus and abroad. She did her best to follow her therapeutic programme and managed to do it with some relapses. She felt much better, had no headaches and most importantly ended up with a perfectly normal blood pressure without drugs. TRAINED
P29	frequent strong musculoskeletal pains with cramps, numbness and stiffness, insomnia, dry cough continuously, poor teeth, flaky nails, skin rashes, lip herpes, mild depression,	Severely compromised metabolic function (very poor calcium metabolism, fat mishandling, and sodium/potassium imbalance). Liver toxicity. GI dysbiosis. Mineral deficiencies. Hormonal imbalance. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To enhance metabolic functions, promote detoxification, open eliminatory routes, restore deficiencies and imbalances, restore bowel flora. Reverse chronicity	24	diet, nutritional supplements, lifestyle changes	feels much better -physically and psychologically-, pains much reduced, her sleep very much improved	The patient did not wish to follow a strict therapeutic programme with all supplements, which she found very expensive; however she made great improvement in several areas, but most importantly in her Bone Mass Density. A test by her doctor 6 months after commencing the naturopathic programme revealed significant improvement from severe osteoporosis to osteopenia. She mentioned that the doctor was surprised to see this improvement without medication and asked to repeat the test which proved to have the same results. TRAINED

P30	strong migraines with vomiting, obesity, irregular menstruation with very heavy flow, palpitations, low iron, musculoskeletal pains and stiffness, frequent colds, GI problems with indigestion and diarrhoeas, strong premenstrual physical and psychological symptoms, allergies, mild haemorrhoids, insomnia, chronic fatigue, oedema	Liver malfunctioning. Enterohepatic route malfunctioning. Adrenal exhaustion. Dysbiosis. Metabolic imbalances (sodium/potassium imbalance, calcium mishandling, blood sugar instability). Mineral deficiencies. Hormonal imbalance. Nervous and emotional imbalance. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, Open eliminatory routes. Enhance liver and adrenal function, restore metabolic imbalances, restore bowel flora, and restore mineral deficiencies and emotional balance. Reverse chronicity	30	diet, nutritional supplements, coffee enemas, lifestyle changes, liver cleanse	she feels great, full of energy, pain-free, stronger immunity, sleeps well, no PMS, no palpitations	The patient completed her therapy and many of her health problems were completely eradicated, and some very much improved. She did not lose all the weight she wanted but she felt much stronger to face the stresses of life. TRAINED
P31	Obesity, daily bad cough with dyspnoea and thick mucus. Bad varicose veins. Strong chronic musculoskeletal pains. Skin rashes. Frequent colds. Strong premenstrual physical and psychological symptoms. Stress. GI problems with indigestion, bloating and heartburn. Lots of cravings. Oedema. Fatigue	Immune seriously compromised. Adrenal exhaustion. Dysbiosis. Liver toxicity. Mineral deficiencies. Metabolic imbalances (fat mishandling, calcium dumping, blood sugar instability, sodium/potassium imbalance). Eliminatory organs seriously compromised. Internal deposition of toxins. Severe chronicity	To enhance immune function, promote detoxification, open eliminatory routes, and restore metabolic imbalances and mineral deficiencies. Reverse chronicity	34	Diet, nutritional supplements, liver cleanse, lifestyle changes	feels great, free from bronchitis and dyspnoea, lost some weight, no pains, no GI problems, no oedema, lighter legs, no PMS	Despite the fact that her family did not support her to do this therapy, and her 4 children gave her a lot of stress, she managed to follow her nutritional therapy with occasional relapses, and most of her problems were solved. She did not lose all her extra weight but her chronic bronchitis was cured. One of her children came for a nutritional diet, but the rest of her family refused to follow the naturopathic principles and this was a reason for her to occasionally abandon them. However, she does not give up and keeps struggling to maintain her healthy diet and lifestyle. TRAINED

P32	fatigue, strong chronic musculoskeletal pains, insomnia, very frequent urinations, stomach discomfort, allergies in spring	Metabolic imbalances (sugar instability, sodium/potassium imbalance, calcium dumping). Mineral deficiencies. GI dysbiosis. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, restore metabolic imbalances and deficiencies, restore bowel flora. Reverse chronicity	8	diet, nutritional supplements, lifestyle changes	feels much better, without GI problems, sleep improved, no allergies	The patient is a very busy man with lots of responsibilities, heavy working schedule, daily business meals in restaurants and conferences and frequent travelling abroad. However, despite his workload he managed to follow his dietary programme for about 2 months with significant improvement to his health. Unfortunately, he did not continue to follow his naturopathic principles, not only due to his busy life but also because his wife refused to support his efforts for a more natural diet and lifestyle. NOT TRAINED
P33	Fatigue. Chronic allergies. Blocked nose continuously. Weak memory. Poor sleep with nigh mares. Sleepy all day. Several boils on his body. Heavy legs. GI problems with indigestion bloating and heartburn. Frequent colds that last long. Frequent urinations. Eating disorders. Chronic musculoskeletal pains and stiffness. Tension headaches.	Liver toxicity. Lymphatic congestion. Mineral deficiencies. Dysbiosis. Emotional body seriously affected	To promote deep detoxification, enhance liver function, restore mineral deficiencies/imbalances, restore bowel flora, enhance lymphatic elimination	17	diet, nutritional supplements, lifestyle changes	Patient feels great. He is happy, full of energy, pain-free, more emotionally balanced, no nightmares, no more pains, no blocked nose, went back to work	This patient was a rather strange case. The information he gave, regarding drug abuse was not clear, and he provided very little information on his family history. I was not entirely sure that a nutritional therapy could affect significant changes to this person, who seemed to have been psychologically disturbed. However, the results were surprisingly positive. He completed his nutritional programme with significant changes to both his physical and emotional bodies. He left the clinic after 17 weeks a totally different person, with most of his problems solved. He found a new job and he was very happy that he could live a normal life. In addition his wife and children adopted the naturopathic principles. TRAINED

P34	Strong chronic joint pains and stiffness, swelled ankles that prevent him from walking, skin rashes, chronic GI discomfort, insomnia, blocked nose, frequent colds, bleeding gums,	Liver toxicity. Metabolic imbalances (sugar instability, calcium mishandling, and sodium potassium imbalance). Mineral imbalances. Adrenal exhaustion. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, restore metabolic balance and mineral deficiencies/imbalances, enhance adrenal function, restore bowel flora. Reverse chronicity	10	diet, nutritional supplements, lifestyle changes	feels great, cannot believe he solved almost all his problems, particularly the serious ones that prevented him from having a normal life, with diet and avoided another operation	The patient is a very busy man involved in a number of businesses, most of them abroad. He travels continuously and this was a major impediment to his wish to embark on a healthier diet and lifestyle. However, his problem exacerbated to the point that he had to walk with the aid of a stick, so he decided to do a nutritional therapy. He followed his programme very strictly for 10 weeks and, although he did not complete it, most of his health problems were cured. He continues to follow the basic naturopathic principles, to the point that his heavy schedule allows. TRAINED
P35	frequent urinations, chronic knee pain and stiffness, mild headaches, poor sleep, mouth ulcers	Liver malfunctioning. Metabolic imbalances (calcium mishandling, fat mishandling, sodium/potassium imbalance). Mineral imbalances. Sluggish lymphatic. Chronicity	To promote detoxification, enhance liver function; restore metabolic imbalances and mineral deficiencies/imbalances. Reverse chronicity	17	Diet, nutritional supplements, lifestyle changes, liver cleanse	feels great, lost weight, sleeps very well and has no more pains	Patient visited the clinic because she wanted to have better eating habits and to lose some weight. She was very happy to be trained to a new person with healthier diet and lifestyle. TRAINED
P36	chronic skin rashes, back pain and stiffness, migraines, double vision after accident, boils inside nose, oedema on legs	metabolic imbalances (calcium mishandling, sodium/potassium) liver dysfunction-cholestasis, mineral imbalances/deficiencies, malabsorption	To promote detoxification, restore metabolic functions, enhance liver function, and restore deficiencies. Reverse chronicity	15	diet, nutritional supplements, liver support, lifestyle changes	feels very well, no more back pain, no headaches	The patient completed his therapeutic programme with most of his health problems resolved. His wife visited the clinic also for a nutritional therapy. TRAINED

P37	Chronic joint pains with numbness and stiffness. Dizziness. Pain and swelling in the liver area, frequent urinations. Chronic GI problems with bloating heartburn and indigestion. Runny itchy eyes. Heavy chest with yellow mucus. Fungi in genital area. Oedema on fingers. Obesity	Metabolic imbalances (calcium dumping, sodium potassium imbalance, fat mishandling). Dysbiosis, liver toxicity. Kidney malfunction. Eliminatory organs compromised. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, restore bowel flora, enhance liver and kidney function, restore metabolic imbalances. Reverse chronicity	15	diet, nutritional supplements, lifestyle changes	feels much better generally, no pains, no vertigo, blood pressure normal	The patient completed her nutritional programme and most of her problems were cured. However, she did not follow the naturopathic principles for long after she left. She returned after a year for a new programme which she did not manage to keep again. She keeps coming back. NOT TRAINED
P38	chronic GI problems with constipation and indigestion, fatigue, frequent urinations, chronic allergies, fungi, frequent infections, teeth stone forming, varicose veins, insomnia, chronic musculoskeletal pains and stiffness, oedema, blocked nose, dizziness	Liver toxicity. Severe dysbiosis. Metabolic imbalances (calcium mishandling, sodium/potassium imbalance). Mineral deficiencies. Immune compromised. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, enhance immune function, restore bowel flora and metabolic imbalances, enhance liver function, and restore deficiencies. Reverse chronicity	10	diet, nutritional supplements, lifestyle changes	feels much better, all her health problems significantly improved, no more fungi, no blocked nose, no nausea	The patient had a compromised immune system due to severe dysbiosis, liver toxicity and nutrient deficiencies. She completed her programme despite her heavy workload, and solved most of her problems. TRAINED

P39	Hair severely falling. Fatigue. Numbed gums, fungus infections and blocked nose after cosmetic jaw surgery. GI problems with constipation and indigestion. Extremely frequent urinations. Poor nails. Haemorrhoids. Palpitations. Musculoskeletal pains and stiffness. Frequent colds. Insomnia. Lots of stress from her falling hair	Malnutrition. Severe mineral and other nutrient deficiencies causing dangerous slow down of metabolic function. Subclinical hypothyroidism.	Restore nutrient deficiencies. Restore bowel flora. Enhance metabolic function. Enhance hormonal function.	17	diet, nutritional supplements, lifestyle changes	feels great, she is thrilled with the results, she became a new person	This patient had been a vegan for several years which caused her severe deficiencies. She tried several nutritional supplements without specialist advice but her condition worsened. She visited the clinic in a state of panic realising that her wrong dietary habits have caused her a lot of problems. As a first emergency step she was prescribed a preliminary highly nutritious programme to address her deficiencies and she was warned about the consequences of underestimating the dangers of malnutrition. She followed her programme strictly and after one month she made an amazing progress with her hair stopped falling. After that she followed a naturopathic nutritional therapy for another 3 months which helped her get rid of all her problems. . TRAINED

P40	Stressful. Chronic insomnia. Chronic fatigue. Eating disorders. Chronic constipation and indigestion. Bleeding gums. Falling hair. Hearing loss. Smell loss. Hot flushes. Varicose veins. Haemorrhoids. Oedema. Chronic joint pains and stiffness. Gallbladder pains. .	Liver toxicity. Enterohepatic route malfunctioning. Dysbiosis. Mineral deficiencies. Metabolic imbalances (calcium dumping, fat mishandling, sodium/potassium imbalance). Hormonal imbalances. Nervous and emotional imbalance. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote detoxification, open eliminatory routes, restore bowel flora and mineral deficiencies, enhance metabolic function, and restore nervous and emotional balance. Reverse chronicity	15	diet, nutritional supplements, lifestyle changes	feels very well, both physically and psychologically, full energy, better sleep, no more GI problems, no pains, no headaches	This patient was by character a perfectionist, continuously under stress and always trying to change the world around her to her standards, being unhappy and frustrated if she failed. She followed her nutritional therapy very strictly, and very soon she was more relaxed but not completely. At this point a new approach to her therapy was decided based on nutrients that interfere with and/or support the production and functioning of the body's neurotransmitters. This had very good results. Her character did not change of course but she felt more relaxed and looked at the world around her with more sympathy. Her husband, who accompanied her to the clinic most of the times, was very happy to say that she has changed a lot and this has been a pleasant surprise for the whole family. TRAINED
P41	Chronic GI problems with indigestion. Frequent lip herpes in stress. Chronic musculoskeletal pains and stiffness. Overweight. Frequent bronchitis. Poor memory. Cravings for sweets	Liver toxic and malfunctioning. Metabolic imbalances (calcium dumping, sodium/potassium imbalance, fat mishandling, blood sugar imbalance). Lymphatic congestion. Mineral deficiencies/imbalances. Eliminatory organs compromised. Chronicity	To promote detoxification. Open eliminatory routes. Enhance metabolic functions. Restore deficiencies. Enhance liver function. Enhance lymphatic function. Reverse chronicity	12	diet, nutritional supplements, lifestyle changes	patient feels much better, full of energy, his memory has very much improved and his blood pressure is within normal limits	The patient was persuaded by his wife to visit the clinic. He did not feel that he had any serious health problem apart from some extra weight, despite the fact that he took medication for hypertension and high cholesterol and his blood sugar was borderline high. He completed his therapy up to the end, because he realised during the course of the treatment that he felt much better, he stopped all his medication and both his blood pressure and his cholesterol went back to normal values. TRAINED

P42	Severe chronic GI problems with constipation bloating, heartburn and indigestion. Chronic musculoskeletal pains, cramps and stiffness. Snoring. Loss of balance. Bleeding gums. Chronic leg oedema. Poor memory. Chronic fungus infections. Varicose veins	High toxicity. Severe GI dysbiosis. Mineral deficiencies/ imbalances. Metabolic imbalances (calcium dumping, fat mishandling, sodium/potassium imbalance). Compromised immunity. Weak circulatory system. Eliminatory organs seriously compromised. Internal deposition of toxins. Severe chronicity.	To promote deep liver detoxification. Open eliminatory routes. Enhance metabolic functions. Restore deficiencies. Enhance immune system function. Strengthen circulatory. Reverse chronicity	38	Diet, nutritional supplements, lifestyle changes, liver cleanse, liver support	feels very well, more healthy, many of his health problems solved, no more spastic colitis,	The patient was a very busy man working in two different countries. He was persuaded by his wife to visit the clinic. He did not feel that he had any serious health problem apart from some overweight, his spastic colitis and his pains. However, the fact that from the first 6 weeks of treatment he had excellent results, with no more digestive problems, no more pains, no leg swelling etc, encouraged him to continue and complete a therapy of several months. He was very happy and persuaded many of his friends to visit the clinic. TRAINED
P43	Severe chronic GI problems with constipation, reflux and indigestion. Fatigue. Sweating. Throat swelling. Strong chronic migraines. Chronic musculoskeletal pains, stiffness and numbness. Chronic respiratory problems. Frequent fungus infections. Insomnia. Oedema. Mouth ulcers. Haemorrhoids. Easy weight gain. Depression	Severe dysbiosis. Liver toxicity. Mineral deficiencies. Metabolic imbalances (calcium dumping, fat mishandling, sodium/potassium imbalance). Immune compromised. Emotional imbalance. Eliminatory organs compromised. Internal deposition of toxins. Severe chronicity	To promote detoxification. Open eliminatory routes. Enhance metabolic functions. Restore deficiencies and bowel flora. Enhance liver function. Enhance immune function. Restore emotional balance. Reverse chronicity	20	diet, nutritional supplements, lifestyle changes	feels great, lots of energy, most of her problems solved, can eat everything without problem, no migraines, no fatigue, no depression, very good sleep, respiratory problems improved but not completely	This patient completed her therapy and despite her frequent relapses and without making significant changes to her lifestyle (smoking), she felt very well, and solved many of her problems. However, she was not adequately trained, because after completing her therapy she re-adopted most of her old habits. She visited the clinic twice again trying to finish her therapy. The good thing is that most of her serious problems did not appear again except from her gastrointestinal symptoms, which of course was a sign that she would soon have some of her old problems back such as her respiratory problems which began reappearing. NOT TRAINED

P44	Chronic GI problems and food intolerances with frequent diarrhoea. Chronic musculoskeletal pains with cramps and stiffness. Chronic ankle oedema. Chronic respiratory problems. Fatigue. Poor memory. Some hearing loss.	High liver toxicity. Severe GI dysbiosis. Weak circulatory system. Kidney malfunctioning. Metabolic imbalances (calcium dumping, fat mishandling, sodium/potassium imbalance, blood sugar instability). Mineral deficiencies. Eliminatory organs compromised. Internal deposition of toxins. Severe chronicity	To promote liver detoxification. Open eliminatory routes. Restore bowel flora. Enhance circulatory and kidney function. Restore metabolic imbalances and mineral deficiencies. Reverse chronicity	20	diet, nutritional supplements, lifestyle changes	Feels great, lighter, and full of energy and most of her problems solved. Her blood pressure within normal range with her medication. Respiratory problems not significantly improved	The patient followed strictly her diet (but continued smoking). She managed to drop her blood pressure to normal through combination of the nutritional therapy and her prescribed medication. She also lost a lot of weight, but most importantly she permanently improved her diet and lifestyle habits according to the naturopathic principles, apart from smoking. PARTLY TRAINED
P45	Very strong and frequent migraines all her life. Chronic musculoskeletal pains with cramps and stiffness. Frequent urinations with mild incontinence. Chronic GI problems with constipation and indigestion. Chronic breast tenderness and pain. Frequent urine infections. Frequent fungi infections. Throat infections. Severe varicose veins	Deep liver toxicity. Metabolic imbalances (calcium dumping, fat mishandling, sodium/potassium imbalance, blood sugar instability). GI dysbiosis. Mineral deficiencies. Immune compromised. Eliminatory organs compromised. Internal deposition of toxins. Severe chronicity.	To promote deep liver detoxification. Open eliminatory routes. Enhance metabolic functions. Restore deficiencies and bowel flora. Enhance immune system function. Reverse chronicity	35	Diet, nutritional supplements, liver cleanse, lifestyle changes	Feels great, no more headaches, no bowel problems. No infections	The patient had strong reactions from applying her naturopathic programme with migraines and vomiting that forced her stopped it for a few days. This proved to be sign of coffee withdrawal because symptoms disappeared when I advised her to introduce one coffee daily. By this way she started the programme again at a much slower rate. I closely monitored her increasing the detoxification intensity very slowly and gradually. She finally managed to complete her therapy with excellent results. Most of her problems were solved. Most importantly her headaches were cured, rarely appearing and at much lower intensity that she did not need any more painkillers. TRAINED

P46	Severe fatigue. Loss of concentration. Poor memory. Chronic severe respiratory problems. Panic attacks. Severe chronic GI problems with diarrhoeas, bloating and indigestion. Lethargy. Strong musculoskeletal pains and stiffness. Frequent fungus infections. Breast lumps. Frequent urinations. Frequent lip herpes. Bleeding gums. Strong migraines. Emotional sensitivity and frustration	Liver toxicity. Severe mineral depletion esp. Zinc. Mercury intoxication. High sodiumisation. Severe GI dysbiosis. Eliminatory organs seriously compromised. Eliminatory organs compromised. Emotional body affected aggravating asthmatic attacks. Eliminatory organs compromised. Internal deposition of toxins. Severe chronicity.	Promote deep liver detoxification. Open eliminatory routes. Restore bowel environment and flora. Restore sodium/potassium balance. Reverse chronicity	34	diet, supplements, lifestyle changes	feels great, full of energy cannot believe her asthma has disappeared without inhalers, no more bowel problems,	The patient came to see me with serious problems after she had gone through different therapies. She followed her diet and lifestyle changes for several months, moving steadily from chronicity to more reactive stages until she finally solved most of her problems. She had no more fatigue and her lungs worked very well without inhalers. She assured me that she will never stop her naturopathic diet and she had already applied the principles to her family. Her husband came also for a nutritional therapy with very good results. TRAINED
P47	Severe chronic GI problems with constipation bloating, heartburn and indigestion. Chronic musculoskeletal pains, cramps and stiffness. Migraines. Heavy menstruation. Dizziness. Allergies. Fungus infections. Frequent lip herpes. Haemorrhoids. Oedema. Frequent colds	Severe dysbiosis. Liver toxicity. Enterohepatic route malfunctioning. Metabolic imbalances (calcium dumping, sodium/potassium imbalance). Mineral deficiencies. Eliminatory routes compromised. Immune imbalanced. Chronicity	To restore bowel conditions and flora. Promote liver detoxification. Open eliminatory routes Enhance metabolic function. Restore deficiencies. Reverse chronicity	13	diet, nutritional supplements, lifestyle changes	Feels great, she is very impressed from the change. No pains, no more stomach and bowel problems and her haemoglobin has reached high levels for the first time in her life	The patient followed her nutritional therapy strictly for 3 months. She was one of those patients who made the radical changes with pleasure and enjoyed every minute of her nutritional programme. She applied the naturopathic principles to all her family. TRAINED

P48	Depression. Confused personality. Fatigue. Fungus infections. Insomnia.	Liver toxicity. Mineral deficiencies. Metabolic imbalances (sodium/potassium imbalance, fat mishandling, blood sugar instability). Eliminatory routes compromised. Emotional body imbalanced with suppressed feelings	To promote liver detoxification. Open eliminatory routes. Restore deficiencies. Restore emotional balance and facilitate release of suppressed feelings	28	diet, nutritional supplements, lifestyle changes, liver cleanse and liver support	feels great, full of energy, calmer, no more confused thoughts, more creative	The patient was a charming person, very talkative but demonstrated a confused personality. He was under psychiatric therapy and has taken several antidepressants and other psycho-drugs during the past years. He visited the clinic with his mother both of them under high stress and this created more confusion to the young patient because he looked very closely connected with his mother. After following his nutritional treatment for several months very strictly and with great pleasure indeed, he became a new person. At some point he begun to come without his mother and by the end of his therapy he started giving up some of his antidepressants. Several months after he finished, he visited the clinic to inform me that he felt great, completely free of drugs, and with a new job. TRAINED
P49	Chronic fatigue. Depression. All body oedema. Palpitations. GI problems with constipation. Frequent urinations. Strong joint and muscle pains and stiffness. Frequent colds. Blocked nose. Dizziness	Deep liver toxicity. GI dysbiosis. Metabolic imbalances (fat mishandling, sodium potassium imbalance, calcium dumping). Mineral deficiencies. Eliminatory routes compromised. Internal deposition of toxins. Chronicity	To promote liver detoxification. Open eliminatory routes. Restore bowel conditions and flora. Enhance metabolic function. Restore deficiencies. Reverse chronicity	8	diet, nutritional supplements, lifestyle changes	Feels great, with high energy, no more pains, no bowel problems, no migraines	This patient felt so good in 8 weeks of nutritional therapy that stopped coming to the clinic. She left saying that she does not need any more therapy, however she promised to continue her naturopathic diet. No information if trained

P50	Severely falling hair. Chronic GI problems with constipation, heartburn, bloating and indigestion. Urine incontinence. Chronic fungus infections. Frequent colds. Blocked nose. Skin rashes. Varicose veins. Swelled legs. Chronic musculoskeletal pains. Food intolerances. Breast cysts. Insomnia. Fatigue. Cravings. Dry eyes	Deep liver toxicity. Metabolic imbalances (calcium dumping, sodium/potassium imbalance, blood sugar instability). GI dysbiosis. Mineral deficiencies. Immune compromised. Eliminatory organs compromised. Internal deposition of toxins. Chronicity	To promote liver detoxification. Open eliminatory routes. Enhance metabolic function. Restore deficiencies. Restore bowel conditions and flora. Reverse chronicity	30	Diet, nutritional supplements, lifestyle changes, liver cleanse, liver support	Feels great, full of energy, bowels and stomach cured, she can eat foods she did not eat for years. Her blood pressure normalised, no more skin rashes, no pains, very good sleep	The patient visited the clinic after being persuaded by her husband who had his nutritional therapy and was cured from all his problems. Her biggest problems were her blood pressure which fluctuated to very high values despite the use of antihypertensive drugs and her hair which was falling severely. She followed her nutritional programme strictly for several months. She had great improvement and after her blood pressure was stabilised to normal for several weeks I advised her to see her doctor for gradual reduction of her drugs. TRAINED

APPENDIX 5

MARKOS KYPRIANOU
MEMBER OF THE EUROPEAN COMMISSION

B-1049 BRUSSELS

Brussels, 28. 06. 2007
MK/D(2007) 1112

Dear Mrs. Kiliari,

I would like to thank you for your letter of 16 May 2007 with a brief introduction of your studies on Nutritional Medicine.

As you have mentioned yourself, Nutritional Medicine is emerging as a new area in the spectrum of medical studies and has an interesting approach to the benefit of the patient in coordination with conventional medical practice.

Given the importance and role of nutrition, and notably of vitamin and mineral supplements in people's overall physical and mental condition, I consider your choice for a doctorate thesis in the area of nutritional medicine very opportune and welcome.

Indeed, much remains to be researched when it comes to a holistic approach to treatment, and synergies between conventional medical practices and complementary medicines ought to be further explored.

In my area of responsibility, you might also find useful sources of information, notably EU legislation on food supplements. Should you need any further information, please do not hesitate to contact Mr. Basil Mathioudakis, Head of Unit in Directorate-General SANCO, dealing with food law, nutrition and labelling. You can reach him under Basil.Mathioudakis@ec.europa.eu or under the telephone number +32 2 29 59 182.

I would be very pleased to receive a copy of your Doctorate Project, after it will have been completed. I am certain it will be interesting and useful.

Taking this opportunity, I would like to wish you every success with your research and your activities as Nutritional Medicine Practitioner.

Yours sincerely,

Mrs. Nitsa Kiliari
20, Piraeus Str, 2nd floor, 202,
Strovolos
CYPRUS

APPENDIX 6

REPUBLIC OF CYPRUS

Our Tel.. 22400108/107
Our Fax. 22434203
e-mail : perm.sec@moh.gov.cy

MINISTRY OF HEALTH
1448 LEFKOSIA

Lefksosia, 18th June, 2007.

Mrs Nitsa Kiliari
20,Piraeus Street
2nd Floor, 202
2023 Strovolos,

Dear Ms Kiliari,

Thank you for your letter and the briefing you made to me during our recent meeting on your project "Nutritional Medicine as a Branch of Medicine in Cyprus".

I noted with great interest what your project and research is about and what is the expected outcome.

I look forward to hearing from you the findings after the completion of your research.

Yours sincerely,

Sotiris Sotiriou
Permanent Secretary
Ministry of Health

SS/mk

APPENDIX 7

EUROPEAN PARLIAMENT

YIANNAKIS MATSIS

16 May 2007

Dear Nitsa

Further to our today's interesting and informative conversation regarding your Doctorate Project on an important area of the Health Sector of Cyprus I would like to express my interest as a Member of the European Parliament to receive a copy of a report of your findings and a copy of your book.

Please note that as a Full Member of the Regional Committee of the European Parliament I frequently deal with issues related to the quality of life of the European citizens and I strongly support any action towards this aim.

Yiannakis Matsis

Member of the European Parliament

APPENDIX 8

INTERCOLLEGE

EFQM

Committed to Excellence in Europe

19 June 2007

Nitsa Kiliari
Nutritional Medicine Practitioner
& Iridologist
20 Piraeus Street
202 Strovolos

Subject: Publication of Nutritional Medicine

Dear Ms. Kiliari,

I have read the description of your proposed book titled Nutritional Medicine as a Branch of Medicine in Cyprus with great interest. I am pleased to inform you that we are indeed interested in publishing the above, under the Intercollege Press series. I believe the theme of your book is quite unique and will be of interest both in Cyprus but also in other countries, as a result of the recent turn to natural medicine and a healthy life-style. It will certainly be of interest to Intercollege itself, as part of the bibliography of the new program in Nutrition that we will soon be introducing.

I enclose a brochure of the Intercollege Press publications for your information.

Nicos Peristianis
Executive Dean

APPENDIX 9

Λευκωσία 18/6/08

Αγαπητή Νίτσα Καλλάρη

Σε συνέχεια της προφορικής μας συζήτησης επιθυμώ μέσω της προσωπικής μας να μεταφερθεί το Λαϊκό Κέντρο Αντιγράφων και πρόσωπα που οργανώνομε, με σκοπό τη συνεργασία και πρόοδο της επιδημιολογικής ομάδας του Κέντρου.
Οι υπηρεσίες και οι τομείς της Παθολογίας Λάρνακας είναι πολύ σημαντικές για το έργο και την αποστολή του κέντρου μας

Για το "Laser Touch" και συνεργάζομαι
Ανδρέας Χριστόφορου

APPENDIX 10

CENTRE OF NUTRITIONAL MEDICINE & IRIDOLOGY

Nitsa Kiliari
Nutritional Medicine Practitioner & Iridologist
BSc, D.N. (TVU London), D.Iridol (PNMC, London)
Registered Member of W.N.M.S and G.N.I (England)

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18 Δεκεμβρίου 2008

Αγαπητέ κύριε

Σε συνέχεια της τηλεφωνικής μας επικοινωνίας παραθέτω κατωτέρω μια σύντομη ενημέρωση για το θέμα της συνέντευξης μας καθώς και ένα προσχέδιο των ερωτήσεων.

Η συνέντευξη αποτελεί μέρος της έρευνας που κάνω για το διδακτορικό μου ανάμεσα σε σημαντικούς παράγοντες και decision makers στην Κυπριακή κοινωνία πάνω σε θέματα υγείας και συγκεκριμένα χρόνιων ασθενειών.

Το θέμα της έρευνας είναι
Η ΣΗΜΑΣΙΑ ΤΗΣ ΔΙΑΤΡΟΦΟΛΟΓΙΚΗΣ ΙΑΤΡΙΚΗΣ ΣΤΗΝ ΠΡΟΛΗΨΗ ΚΑΙ ΘΕΡΑΠΕΙΑ ΧΡΟΝΙΩΝ ΑΣΘΕΝΕΙΩΝ ΣΤΗΝ ΚΥΠΡΟ

Θα ήθελα να σας ενημερώσω ότι είμαι Nutritional Medicine Practitioner, απόφοιτος του Thames Valley University του Λονδίνου στον κλάδο της Διατροφολογικής Ιατρικής καθώς επίσης και του London School of Economics στον κλάδο Διεθνών Σχέσεων. Ασχολούμαι με θεραπείες χρόνιων ασθενειών με διατροφικά μέσα και βλέπω καθημερινά ασθενείς με διάφορα προβλήματα. Εδώ και δύο χρόνια κάνω το διδακτορικό μου με το Middlesex University του Λονδίνου. Στόχος μου είναι να διαπιστώσω σε πιο βαθμό η Κυπριακή κοινωνία γνωρίζει την δύναμη της διατροφής πάνω στην υγεία, πως οι decision makers αντιμετωπίζουν την πιθανότητα κάποια μέρα οι ασθενείς να έχουν την δυνατότητα να επιλέγουν μεταξύ συμβατικών και διατροφολογικών θεραπειών, και αν μπορεί το κράτος να διαδραματίσει κάποιο ρόλο σ' αυτό.

Nitsa Kiliari
Nutritional Medicine Practitioner & Iridologist

Σίγουρα θα είναι εις γνώση σας ότι ο Ιπποκράτης ο οποίος θεωρείται ο Πατέρας της Ιατρικής, ασκούσε και δίδασκε την Ιατρική σε τρεις κλάδους: τον Φαρμακευτικό, τον Χειρουργικό και τον Διατροφικό. Ο τελευταίος αγνοήθηκε δια μέσου των αιώνων και πρόσφατα αναβιώνει στα Πανεπιστήμια με την μορφή της Διατροφολογικής Ιατρικής μετά την διαπίστωση ότι ο οι διάφορες χρόνιες ασθένειες, όπως ο διαβήτης, η οστεοπόρωση, η αρθρίτιδα κλπ, δυστυχώς αυξάνονται με ιλιγγιώδη ρυθμό και κάποιες από αυτές θεωρούνται πλέον ανίατες αφού μόνο με συμπτωματική χρόνια θεραπεία μπορούν να αντιμετωπισθούν.

Θα ήθελα να τονίσω ότι δεν χρειάζεται να έχετε κάποιες ειδικές γνώσεις για την συνέντευξη. Απλά θα ήθελα να ακούσω τις απόψεις σας.

Επισυνάπτω επιστολή του πρώην Επιτρόπου για θέματα υγείας κ. Μάρκου Κυπριανού, στην οποία γίνεται αναφορά στην Διατροφολογική Ιατρική, για ενημέρωση σας.

Ελπίζω να μπορέσετε να μου διαθέσετε λίγη ώρα από τον πολύτιμο χρόνο σας

Με εκτίμηση
Νίτσα Κοιλιάρη

Υ.Γ. Μπορείτε να επικοινωνήσετε μαζί μου στα παρακάτω τηλέφωνα

Σταθερό:	22442818
Κινητό:	99625355
Fax:	22519933
Email:	kiliari@kiliarinitsa.com

Nitsa Kiliari
Nutritional Medicine Practitioner
DProf Candidate-Middlesex University

ΕΝΗΜΕΡΩΣΗ

Ο Παγκόσμιος Οργανισμός Υγείας σε διάφορα δημοσιεύματα του επιδεικνύει μεγάλη ανησυχία για την εξέλιξη των διάφορων χρόνιων ασθενειών στον Δυτικό Κόσμο, οι οποίες φαίνεται να αυξάνονται ραγδαία με την πάροδο του χρόνου. Έρευνες του ΠΟΥ δείχνουν σοβαρές ελλείψεις ανθρώπινου δυναμικού με ειδικότητα, γνώση και εμπειρία στην πρόληψη και έλεγχο των χρόνιων ασθενειών όπως, Υπέρταση, Διαβήτης και Άσθμα. Επιπλέον η Ευρωπαϊκή Επιτροπή αναγνωρίζει ότι έξι από τους επτά σοβαρότερους λόγους πρόωρων θανάτων έχουν σχέση με το πώς και τι τρώμε, πίνουμε και κινούμαστε. Η ρυθμοί αύξησης της παχυσαρκίας, η οποία θεωρείται ως μία από τις σοβαρότερες αιτίες χρόνιων ασθενειών, έχουν φθάσει σε πολύ ανησυχητικά επίπεδα.

Τον Μάιο του 2004 ο Παγκόσμιος Οργανισμός Υγείας, αναγνωρίζοντας τους ολοένα αυξανόμενους ρυθμούς εξέλιξης των χρόνιων ασθενειών, προσυπέγραψε την Global Strategy on Diet, Physical Activity and Health. Η νέα αυτή στρατηγική καλεί σε αλλαγή νοοτροπίας και φιλοσοφίας στον τρόπο αντιμετώπισης της δημόσιας υγείας με στόχο την 'αλλαγή των συνθηκών που συντελούν στο να αρρωσταίνουν οι άνθρωποι'. Ο ΠΟΥ δηλώνει ότι 'ένα επιτυχημένο σύστημα υγείας επικεντρώνεται στην ΠΡΟΛΗΨΗ ΤΗΣ ΑΣΘΕΝΕΙΑΣ ΚΑΙ ΤΗΝ ΠΡΟΩΘΗΣΗ ΤΗΣ ΥΓΕΙΑΣ παρά στην θεραπεία. Πάνω στην ίδια γραμμή η Ευρωπαϊκή Ένωση, έχει υιοθετήσει αριθμό μέτρων με κατεύθυνση την βελτίωση της υγείας των πολιτών της. Αυτά περιλαμβάνουν:

a. Το EU Platform on Diet, Physical Activity and Health (Μάρτιος 2005), και
b. Το Green Paper για την πρόληψη της παχυσαρκίας και των χρόνιων ασθενειών τον Δεκ 2005.

Παράλληλα με τα πιο πάνω η Ευρωπαϊκή Επιτροπή ετοιμάζει νομοθεσία σε επίπεδο Ευρωπαϊκής Ένωσης, για να διαμορφώσει καλύτερα το βασικό πλαίσιο μέσα από το οποίο οι καταναλωτές θα μπορούν να έχουν καλύτερες επιλογές σε θέματα διατροφής.

Ο Παγκόσμιος Οργανισμός Υγείας επίσης υποδεικνύει ότι οι διατροφικές ανεπάρκειες σε βιταμίνες, μέταλλα και ιχνοστοιχεία, αποτελούν καθοριστικούς παράγοντες στην εξέλιξη των χρόνιων ασθενειών, όπως καρδιαγγειακά προβλήματα, καρκίνος, διαβήτης, οστεοπόρωση, ανωμαλίες στην όραση και αρθριτικά. Σημαντικές επιστημονικές έρευνες αποδεικνύουν ότι προληπτική χρήση διατροφικών συμπληρωμάτων, όπως αντιοξειδωτικά, βιταμίνες, μέταλλα και ιχνοστοιχεία βοηθά σημαντικά στον περιορισμό των χρόνιων ασθενειών. Το Food and Agriculture Organisation των Ηνωμένων Εθνών εκφράζει σοβαρές ανησυχίες για τις πιθανές ανεπάρκειες σε θρεπτικά στοιχεία ανάμεσα σε πληθυσμούς με διαφορετικές δίαιτες και τρόπους ζωής. Έρευνες πάνω στις διατροφικές συνήθειες των Ευρωπαίων, υποδεικνύουν ότι υπάρχουν συνεχόμενα προβλήματα ανεπαρκειών σε θρεπτικά στοιχεία τα οποία επηρεάζουν όλες τις χώρες μέλη της ΕΕ σε διάφορες διαβαθμίσεις.

Τι είναι η Διατροφολογική Ιατρική

Η Διατροφολογική Ιατρική την οποία ο Ιπποκράτης δίδαξε και άσκησε σαν κλάδο της Ιατρικής, ταυτόχρονα με την Φαρμακευτική και Χειρουργική, και η οποία παραμερίστηκε διαμέσου των αιώνων, αναβιώνει τις τελευταίες δεκαετίες στα πανεπιστήμια του Δυτικού Κόσμου, ενώ δεν έπαψε ποτέ να χρησιμοποιείται σαν μέσο θεραπείας σε διάφορες παραδοσιακές κοινωνίες. Η Διατροφολογική Ιατρική δεν απορρίπτει την Κλασσική Ιατρική αντίθετα προσπαθεί να την ενδυναμώσει και να συμπληρώσει τις ελλείψεις και αδυναμίες της. Εφαρμόζεται κυρίως για την θεραπεία χρόνιων ασθενειών και χρησιμοποιεί

διατροφικά προγράμματα στα οποία περιλαμβάνονται δίαιτα και διατροφικά συμπληρώματα (βιταμίνες, ιχνοστοιχεία κλπ) με στόχο την πρόληψη η/και θεραπεία των βαθύτερων αιτίων που προκάλεσαν την χρόνια ασθένεια. Τα διατροφικά συμπληρώματα χρησιμοποιούνται σε αυξημένες δόσεις για σύντομο χρονικό διάστημα για να έχουν αποτέλεσμα. Οι σπουδές στην Διατροφολογική Ιατρική διαφέρουν από εκείνες στην Διαιτολογία. Το πτυχίο Διατροφολογικής Ιατρικής απαιτεί εντατική εκπαίδευση μεταξύ άλλων, στις ιατρικές επιστήμες όπως Βιολογία, Ανατομία, Φυσιολογία και Διατροφική Βιοχημεία, καθώς και εκτεταμένη μελέτη και έρευνα των αιτίων και των τρόπων θεραπείας των χρόνιων ασθενειών. Κλινική εξάσκηση με ασθενείς στην κλινική του Πανεπιστημίου είναι απαραίτητη.

ΕΡΩΤΗΣΕΙΣ

1. ***Πως αντιμετωπίζει ο σύνδεσμος σας τις ανησυχίες των διεθνών οργανισμών στην περίπτωση της Κύπρου;***

2. ***Πιστεύετε ότι η διατροφή μπορεί να αποτελέσει αιτία ασθενειών;***

3. ***Πως βρίσκετε την ιδέα της χρήσης διατροφικών μέσων για θεραπεία;***

4. ***Θεωρείτε ότι η χρήση συμπληρωμάτων για σκοπούς θεραπείας πρέπει να γίνεται με συμβουλή ειδικών?***

5. ***Ποιος πιστεύετε ότι μπορεί να θεωρηθεί ειδικός για να δώσει συμβουλές για θεραπευτικές δίαιτες και διατροφικά συμπληρώματα;***

6. ***Πιστεύετε ότι θα μπορούσε η Διατροφολογική Ιατρική να συνεισφέρει στην πρόληψη η/και θεραπεία κάποιων χρόνιων ασθενειών όπως διαβήτης, υπέρταση, οστεοπόρωση;***

7. ***Πιστεύετε ότι θα ήταν ίσως πιο αποτελεσματική όταν γίνεται σε συνδυασμό με την Φαρμακευτική η/και Χειρουργική Ιατρική;***

8. ***Πιστεύετε ότι το σημερινό σύστημα υγείας στην Κύπρο δίνει ικανοποιητική έμφαση στην Διατροφή σαν μέσο πρόληψης η/και θεραπείας;***

9. ***Πιστεύετε ότι οι πολίτες έχουν δικαίωμα να επιλέγουν τον τρόπο θεραπείας τους;***

10. ***Πιστεύετε ότι το κράτος θα πρέπει να έχει κάποιο ρόλο στην διευκόλυνση των πολιτών να επιλέγουν τον τρόπο θεραπείας;***

11. ***Γνωρίζετε ότι υπάρχουν χώρες, όπως η Κίνα, στις οποίες το εθνικό σύστημα υγείας δίνει το δικαίωμα στον πολίτη να επιλέξει μεταξύ της συμβατικής ιατρικής και παραδοσιακών μεθόδων θεραπείας;***

12. ***Πως βρίσκετε την ιδέα της καθιέρωσης της Διατροφολογικής Ιατρικής σαν κλάδος της Κλασσικής Ιατρικής;***

13. ***Πιστεύετε ότι θα υπάρχει αντίδραση από τους γιατρούς αν η Διατροφολογική Ιατρική έπαιρνε θέση σαν ξεχωριστή ειδικότητα της Ιατρικής στην Κύπρο;***

14. ***Αν σας ζητείτο να αποφασίσετε για την συμπερίληψη της Διατροφολογικής Ιατρικής σαν ειδικότητα της Ιατρικής στο Εθνικό Σύστημα Υγείας τι θα ψηφίζατε;***

APPENDIX II.

Nitsa Kiliari
Nutritional Medicine Practitioner & Iridologist
BSc, D.N. (TVU London), D.Iridol (PNMC, London)
Registered Member of W.N.M.S and G.N.I. (England)

20, Piraeus Str, 2nd Floor, 202, Strovolos
Tel: 22 44 28 18 Fax: 22 51 99 33
Email: skiliari@logosnet.cy.net

PATIENT'S INFORMED CONSENT FORM

I hereby grant my consent to Mrs Nitsa Kiliari to use any and all the information supplied to her by me to be used for her Doctorate project and/or any book and/or article to be published relating to Nutritional Medicine or related subjects. Information to be used may include personal and family medical histories, other doctors' reports, laboratory records and any other material relating to my case.

Above consent is subject to the condition that all personal information/data will be kept **CONFIDENTIAL** and that no names or addresses of me or any member of my family will be revealed.

I have read and understood the above and I hereby confirm that this consent was given voluntarily.

Name..... .....

Signature..... .....

Date... .....

ΔΙΑΓΝΩΣΤΙΚΟ ΘΕΡΑΠΕΥΤΙΚΟ ΚΕΝΤΡΟ ΔΙΑΤΡΟΦΟΛΟΓΙΑΣ & ΙΡΙΔΟΛΟΓΙΑΣ
Νίτσα Κοιλιάρη
Πτυχιούχος Διατροφολογικής Ιατρικής & Ιριδολόγος
BSc, D.N. (TVU London), D.Iridol (PNMC, London)
Registered Member of W.N.M.S and G.N.I (England)

Γεωργίου Αναστασίου 1,1ος Όροφος, 103,
2008 Στρόβολος, Ακρόπολη, Λευκωσία
Τηλ: 22 44 28 18 Φαξ: 22 51 99 33
Email: kiliari@indexcy.com

ΔΗΛΩΣΗ ΣΥΓΚΑΤΑΘΕΣΗΣ ΑΣΘΕΝΟΥΣ

Με την παρούσα παραχωρώ την συγκατάθεση μου στην κ. Νίτσα Κοιλιάρη να χρησιμοποιήσει όλο το πληροφοριακό υλικό που σχετίζεται με προσωπικά μου δεδομένα τα οποία κατέχει, για σκοπούς του διδακτορικού της ή/και δημοσίευσης άρθρων ή/και βιβλίου πάνω σε θέματα που σχετίζονται με την Διατροφολογική Ιατρική. Το πληροφοριακό υλικό μπορεί να περιλαμβάνει το ιατρικό και οικογενειακό μου ιστορικό καθώς και διάφορα έγγραφα με αποτελέσματα χημικών και βιοχημικών αναλύσεων, ακτινολογικών ευρημάτων και άλλων εξετάσεων.

Η εξουσιοδότηση αυτή δίνεται με την προϋπόθεση ότι τα προσωπικά μου στοιχεία θα παραμείνουν εμπιστευτικά και ότι δεν θα αποκαλυφθούν στοιχεία που αφορούν το όνομά μου, τη διεύθυνσή μου ή τα ονόματα και διευθύνσεις συγγενικών μου προσώπων.

Επιβεβαιώνω ότι η παρούσα δόθηκε με τη δική μου θέληση.

Όνομα ολογράφως.....

Υπογραφή .....

Ημερομηνία .....

APPENDIX 12

From: Katerina Kokkinou
To: kiliari@kiliarinitsa.com;
cc: Peristianis, Nicos;
Andreas Charalambous;
Subject: RE: survey
Date: 17 January 2008 09:51:01
Attachments: QuestionnaireNitsaKiliari.doc

Κυρία Κοιλιάρη

μετά από οδηγίες του κ. Περιστιάνη διεξήγαγα μια μικρή πιλοτική έρευνα, 10 ατόμων, χρησιμοποιώντας το ερωτηματολόγιο που μας στείλατε. Σας στέλνω πίσω το ερωτηματολόγιο με τα σχόλια των ατόμων που συμμετείχαν.

Για οποιεσδήποτε διευκρινήσεις είμαι στη διάθεσή σας.

Με εκτίμηση
Κατερίνα Κόκκινου

Katerina Kokkinou
Sociologist - Researcher
University of Nicosia
46 Makedonitissas Ave.
P.O. Box 24005
1700 Nicosia
Cyprus

Tel: 0035722841661
Fax: 0035722352059
E-mail: kokkinou.k@unic.ac.cy

-----Original Message-----
From: Ifi Christoforou
Sent: Wednesday, January 16, 2008 1:55 PM
To: Katerina Kokkinou
Subject: FW: survey
Importance: High

From: Nitsa Kiliari [mailto:kiliari@kiliarinitsa.com]
Sent: Friday, January 11, 2008 10:08 AM
To: Ifi Christoforou
Subject: survey
Importance: High

Dear Nicos

Further to our telcon of this morning I attach my questionnaire for the survey.

Kindest regards
Nitsa

APPENDIX 13

Ερώτηση με αρ. 23.06.009.05.01.240, ημερομηνίας 28 Σεπτεμβρίου 2010, του βουλευτή εκλογικής περιφέρειας Λευκωσίας κ. Γιώργου Περδίκη

«Έχω πληροφορηθεί ότι σε χώρες μέλη της Ευρωπαϊκής Ένωσης, όπως η Μεγάλη Βρετανία, συνυπάρχουν τρεις εντελώς διαφορετικές επαγγελματικές ομάδες επιστημόνων διατροφής, που η καθεμιά έχει διαφορετικό ρόλο στη διασφάλιση και προώθηση της υγείας του λαού. Οι τρεις αυτές ομάδες είναι θεραπευτές διατροφολόγοι, διαιτολόγοι και διατροφολόγοι.

Ήδη στο Ηνωμένο Βασίλειο προχωρεί η θεσμική ρύθμιση των τριών αυτών κατηγοριών, για να μη δημιουργούνται προβλήματα. Σύμφωνα με τον Επίτροπο Υγείας της Ευρωπαϊκής Ένωσης, η θεραπευτική διατροφολογία ή, όπως άλλως αναφέρεται ο κλάδος αυτός, η διατροφολογική ιατρική αποτελεί προτεραιότητα για την Ευρωπαϊκή Ένωση.

Παρακαλώ τον αρμόδιο υπουργό να πληροφορήσει τη Βουλή των Αντιπροσώπων αν υπάρχει πρόθεση να προχωρήσει στη συμπερίληψη μιας νέας κατηγορίας, εκείνης των επιστημόνων διατροφολόγων θεραπευτών, στο Μητρώο Εγγραφής Επιστημόνων Τροφίμων, Τεχνολόγων Τροφίμων και Διαιτολόγων, η οποία θα πρέπει να είναι ανεξάρτητη από εκείνη των διαιτολόγων, αφού είναι εντελώς διαφορετική ειδικότητα με διαφορετικές σπουδές.»

Απάντηση ημερομηνίας 18 Ιανουαρίου 2011 του Υπουργού Υγείας κ. Χρίστου Πατσαλίδη στην ερώτηση με αρ. 23.06.009.05.01.240, ημερομηνίας 28 Σεπτεμβρίου 2010, του βουλευτή εκλογικής περιφέρειας Λευκωσίας κ. Γιώργου Περδίκη

«Αναφέρομαι στην επιστολή σας με αρ. φακ. 23.06.009.05.01.240 ημερ. 28/9/2010 σχετικά με το πιο πάνω θέμα και σας πληροφορώ ότι το Υπουργείο Υγείας σε συνεργασία με το Συμβούλιο Εγγραφής Επιστημόνων Τροφίμων, Τεχνολόγων Τροφίμων και Διαιτολόγων και το Σύνδεσμο Διαιτολόγων προχώρησε με την ετοιμασία τροποποιητικού Νομοσχεδίου για τον περί Εγγραφής Επιστημόνων Τροφίμων και Διαιτολόγων Νόμο.

2. Το τροποποιητικό νομοσχέδιο έχει σταλεί στις 23/12/2010 στο Υπουργικό Συμβούλιο για έγκριση και στην συνέχεια θα κατατεθεί στην Βουλή των Αντιπροσώπων για ψήφισή του σε Νόμο. Σκοπός του Νομοσχεδίου είναι ο εκσυγχρονισμός του βασικού νόμου σε σχέση με τους ορισμούς που χρησιμοποιούνται, η συμπερίληψη στο Νόμο του επαγγέλματος του διατροφολόγου και ο πληρέστερος καθορισμός των καθηκόντων και προσόντων των τριών κλάδων που αφορά ο Νόμος, δηλαδή των διαιτολόγων, κλινικών διαιτολόγων και διατροφολόγων.

Είμαστε στη διάθεσή σας για οποιεσδήποτε διευκρινήσεις.»

ΓΧ/ΓΕ/ΑΡ-23.06.009.05.01.240

CASE STUDY 1 (X)

1. ASSESSING THE CLIENT'S NEEDS AND THE APPROPRIATENESS OF NUTRITIONAL THERAPY

a. SYNOPSIS OF CURRENT PRESENTING SYMPTOMS

DATA COLLECTION / METHODS
A Patient Informed Consent Form was read and signed by the client before entering the consultation room

i. Requested before hand and provided by X at the 1st consultation

- Family medical questionnaire: X's babyhood and early childhood, family medical and lifestyle details, medication/supplements.
- Available biochemical, diagnostic and other laboratory tests and reports
- Doctors' previous diagnoses/reports
- Pharmaceutical drugs (Active ingredients, leaflets etc)

ii. Recorded in handwriting during the first consultation

- X's present and past medical history, lifestyle, and dietary habits

PORTRAIT OF THE CLIENT (*Appendix 15, Initial Consultation Worksheet*)
X visited the clinic with a number of serious problems. She complained that she felt toxic, painful and tired. Her hair was dull and oily and her skin had brown spots. Her psychology was very bad due to long-lasting family problems, and poor sleep due to pain. Her complaints included:

- Chronic gastrointestinal problems including, constipation (since childhood) with occasional bouts of diarrhoea, pain and bleeding, painful and bloated stomach difficult to digest meat. She had a medical diagnosis for ulcerative colitis for which she was prescribed Sulphasalazine tablets. Both a kinesiologist and a homeopath diagnosed Candidiasis. She used Begunis tea for constipation and caprylic acid for Candida. She was operated in the past to remove precancerous polyps in the colon. At that same time she was diagnosed with Irritable Bowel Syndrome.
- Chronic joint pains, stiffness and cramps, since her early 30s. She had medical diagnoses for severe osteoporosis, osteoarthritis and degenerative bone and cartilage changes. She was prescribed Joint Ace (glucosamine/chondroitin) and Voltaren. She had a cartilage operation in the past.
- High cholesterol and triglycerides
- Large volumes of urine daily but she felt she had water retention because her fingers were 'puffy' often.
- Circulatory: A lot of small thread veins and one medium size on her thighs
- Strong headaches, getting more frequent recently. Used aspirin
- Chesty cough and heavy catarrh. Sinus problem with green mucus all her life. Used a lot of antibiotics in the past for this
- Heavy periods since young age. Last summer had hormonal treatment to shrink an ovarian cyst. Took the Pill for many years in younger age. Period late onset (at her 14)

- X's life has been full of stress and unhappiness. Her father abandoned her mother while pregnant, and late in her life got married to a very demanding husband, who pushed her to have an abortion on the 5th month on her pregnancy (which she denied). Not long after her baby's birth he forced her to sterilisation to avoid future pregnancies. Her key-hold surgery was infected leading to septicaemia and emergency operation to save her life.

b. RATIONALE

INHERITANCE

X's has a heavy inheritance of accumulated toxicity (cancer) and weakness of important organs and systems (digestive, circulatory, liver, immune) from the maternal side. Both grandparents died at early age from cardiovascular weakness. Mother, a heavy smoker and daily alcohol consumer, presents a strong liver picture and a seriously compromised immune as a result of severe bowel flora imbalances (chronic diarrhoea) and malabsorption leading to deficiencies of essential nutrients and mineral imbalances (poor arteries, fatigue, cancer, frequent infections, chronic headaches, hypertension, chronic joint pains), most importantly zinc (mouth ulcers, hypertension, poor memory, frequent infections) and calcium/magnesium imbalance (joint and muscle pains and stiffness, poor arteries).

PATHWAY OF DISEASE

Not surprisingly, interpretation and evaluation of X's data revealed severe gastrointestinal dysbiosis, evident from her chronic constipation, pain, bleeding, bloating and indigestion. Apparently, this condition was both inherited and acquired. Her digestive system had an environment with disturbed acidity and seriously imbalanced bowel flora, since birth (constipated), and this condition had worsened from the volume of antibiotics (for life-long sinus problems) and steroids (birth pills for 17 years in young age) together with an overloaded with meat, cheese and alcohol, acid-forming diet. This condition had led to malabsorption of nutrients from the small intestine, which in turn created:

- Mineral deficiencies/imbalances: particularly zinc (frequent infections, precancerous polyp, late menstruation and irregularities, abnormal birth delivery) and magnesium (cramps, poor musculoskeletal function, puffy fingers). The case of heavy metal (mercury) toxicity could not be ruled out, since X had too many mercury fillings until her mid 30s, allowing the reasonable suspicion of mercury leaking and accumulating for years in her body.
- Metabolic imbalances: such as poor fat handling (high cholesterol), sodium/potassium imbalance (joint pains, heavy periods, oily hair, sinus, headaches), and calcium mishandling (osteoporosis, osteoarthritis, shoulder calcification, joint and muscle stiffness and cramps). In addition, X's acid forming diet with lots of protein, starch and fats was an important stimulator of bone resorption through triggering parathormone secretion to restore blood pH.

WEAK AND COMPROMISED ORGANS/SYSTEMS IDENTIFIED:

- Compromised immunity, (septicaemia, precancerous polyps). Immune cells also participate in bone manufacturing process which is also malfunctioning.
- Weak circulatory system: (varicose veins, oedema)
- Lymphatic system: congested (mucus in chest, and sinus)
- Enterohepatic route: X, similarly to her mother, presents a strong liver picture, with a suppressed function of the enterohepatic route. Her liver is seriously compromised and malfunctioning, not properly handling and eliminating fats (high cholesterol), and toxic material (heavy catarrh) from the body leading to internal deposition of toxins (ovary cyst, colon polyps).

EVALUATION OF THE LIFE FORCE

Apparently, X's Life Force is seriously compromised. She is deeply chronic however her Life Force still demonstrates signs of a low degree of vitality, in the attempts to overthrow a volume of toxins through heavy periods and frequent colds with heavy catarrh. There is hope that a well designed deep constitutional therapy, with radical changes in her diet and lifestyle and adequate nutrient supplementation could significantly enhance her self healing mechanisms to throw out as much as possible of the inherited and acquired toxicity and support the efforts towards regression of the pathway of disease. It is important that the treatment is so designed as to promote simultaneous enhancement of the function of the body's eliminatory organs, which appear compromised especially the liver, bowel, and lymphatic, to avoid recirculation of toxins and self-poisoning.

c. RESOURCES, OPTIONS and RISKS

Before designing the treatment an evaluation of available resources and options as well as potential risks to the patient were taken into consideration as follows:

- X 's financial situation was not very good and therefore the cost of the therapy was kept to the minimum possible, using only those supplements considered essential for the wholistic therapy, and for some pain relief. This matter was discussed with the patient before preparation of the treatment.
- X was under medical treatment for her ulcerative colitis with Sulfasalazine tablets. Some other drugs and supplements mentioned were taken in the past, mostly for symptomatic relief, not regularly and at the time of the consultation she was not taking any on them. Therefore, careful investigation of possible interactions between sulfasalazine and prescribed dietary supplements was undertaken. No supplements with strong anticoagulant effect were included, in view of evidence demonstrating the possibility of Sulfasalazine to increase the effects of anticoagulants.
- X was diagnosed as highly toxic and in a state of chronicity, however due to the fact that her life force was demonstrating a degree of vitality, a smaller intensity of treatment was decided to avoid aggravations, especially taking into account her pains and ulcerations and the fact that she was under medication.

2. EDUCATING THE CLIENT

a. EXPLAIN THE SELECTION OF ASSESSMENT METHODS USED TO DETERMINE CLIENT TREATMENT

The first stage of the treatment was designed on the basis of the interpretation above (1b) and the attendant considerations (1c). The programme consisted of dietary guidelines and a list of nutritional supplements,(*Appendix 16*). The purpose of the fist prescription (as outlined in the second page of the patient's treatment booklet (*Appendix 16, p.2*) was to:

i. Promote active elimination of the body's toxic load
ii. Enhance liver function
iii. Restore any possible nutrient deficiencies and mineral imbalances
iv. Address the calcium dumping syndrome and osteoporosis
v. Enhance immune system function
vi. Restore bowel flora balance
vii. Control blood sugar fluctuations

b. DIETARY ADVICE

(*Appendix 16, pp. 4-8*)

Special attention was taken, when constructing this diet, to remove all sources of toxins, to reduce protein intake in order to reduce liver workload, and to increase the ratio of omega3/omega6 essential fatty acids. Omega 3 EFAs perform several functions, relative to her health condition, such as: production of anti-inflammatory prostaglandins; inhibition of the arachidonic acid pathway which leads towards the production of pro-inflammatory prostaglandins, and promotion of the health of heart and the circulatory system. The importance of the intake of three meals and two snacks daily was highlighted at the first page of the diet to help stabilise blood sugar levels, essential for the patient's physical and psychological wellbeing.

Meats were not allowed in order to keep the protein content of the diet low; to discourage the putrefactive bacteria from thriving in the intestines; and to reduce the production of arachidonic acid in the body which promotes the production of pro-inflammatory prostaglandins. Fish was included for directional purposes, towards raising the omega3/omega6 ratio and the production of good prostaglandins and for contributing to the control of the intensity of the treatment. Dairy products were entirely excluded because, among their other adverse effects, they suppress liver function, leave hard residues on the bowel walls blocking the absorption of nutrients, make bowel flora alkaline encouraging zinc deficiency and encourage sodium entry into the cells leading to massive potassium loss. Nuts were included for their highly beneficial effect on health generally, but at limited quantities due to their high protein and fat content. Wheat products were also entirely excluded because among other things, they are highly acidic to the cells, suppress liver and intestinal function and block the production of prostaglandins series 1 which are important for immune function. Rye was excluded for being also acidic to the cells. Salt was eliminated to help restore sodium/potassium imbalance and promote de-sodiumisation and re-mineralisation of the cells. Increased sodium in the cells displaces potassium thereby suppressing cell energy production and the patients' life force. Sodium is

also a known zinc antagonist. Linseeds and pumpkin seeds were included for directional purposes, towards increasing the intake of omega 3 fatty acids. Linseeds were particularly included because they can improve digestion and prevent and reverse constipation, since they are an excellent natural laxative due to their mucilage content. They also, improve cardiovascular health by treating fatty degeneration in cardiovascular disease. Olive oil was included for its numerous beneficial effects on health, among which it decreases the synthesis of Leukotrienes B4 which are involved in the pain, redness and swelling that occurs in acute inflammation. Linseed oil was also included for its exceptionally high content of omega 3 essential fatty acids. All other oils were strictly excluded in order to maintain the desirable level of omega3/omega6 ratio and also to keep the fat content of the diet low. Nuts were allowed for their high nutritional value, but only sparingly, in order to keep in check their negative influence on the omega3/omega6 ratio. Walnuts were proposed as a first choice due to their higher omega 3 content compared to other nuts. Brown, short grain rice was a compulsory item in the diet due to its importance in facilitating second stage elimination. The use of potatoes and other grains was limited in order to allow the use of higher amounts of rice. Fruit were eliminated for the first two weeks to keep aggravations under control. This concern was related to the patient's ulcerative colitis which was active when she came for the consultation and her strong joint pains. All food containing yeast and other forms of fermentation (bread, vinegar, mushrooms) were also excluded within the context of the attempt to restore bowel bacterial balance. The need of daily consumption of specific vegetables (such as garlic and ginger) was stressed for their antibacterial effect in the bowel, as well as a list of vegetables and spices with known anti-oxidant properties. No dried fruit, honey or molasses were allowed for their sugar content which encourages the putrefactive bacteria. The importance of drinking and cooking with filtered, non chlorinated water was stressed

c. INITIAL SUPPLEMENT PROTOCOL WITH RATIONALE

(*Appendix 16, p. 11*)

The first stage of the treatment was designed to provide adequate supplementation for a rather low intensity of therapy, taking into consideration the patient's low financial resources and the condition of her health (*as described above*). The major concern was to embark on a degree of detoxification but at the same time include a directional element towards opening the routes of elimination (liver, bowel), in order to avoid serious aggravations, and to provide a degree of pain relief and mood enhancement to the patient. Choice of supplements was limited in the Cyprus market. From the therapeutic formulae, only Archturus were available.

The Archturus Basic Formula One was prescribed as the basic vitamin/ mineral formula which contained adequate magnesium for effective first stage (cell level) detoxification on one hand, but supplemented together with calcium in order to keep the intensity under some control. Patient was guided to start with very low dosage for the first week and then to double the dosage the following week. Inulac, a good probiotic available in the Cyprus market, together with Betaine/Pepsin HCl and Pancreatin were included as a good combination of the beneficial bacteria supplied together with the essential enzymes, required to provide the acidic environment for their survival and enhancement. In addition,

Glucosamine (combined with MSM as a painkiller) was included for its effect on gradually restoring degenerated cartilage. Increased dosage was prescribed initially to eliminate pain. In addition DL-Phenylalanine (DLPA complex) was included, to be taken only when needed, for pain, as well as for its mood enhancing, effects. To keep the prescription cost low, pantothenic acid, although considered important for its general action upon the well-being of the cells, was planned for the following stage when intensity would have been increased.

d. LIFESTYLE ADVICE

A significant part of the patient's handout was devoted to general lifestyle guidelines which included advice for healthy cooking, exercise, quality of food consumed, relaxation, and caution of environmental and other sources of toxins, (*Appendix 16, p. 9*).

In addition guidelines were given to help stabilise blood sugar levels, in order to avoid the effects of hypoglycaemia on the physical and emotional parts of the body, (*Appendix 16, p. 10*).

The last three pages (*Appendix 16, pp.12-14*) included a general guide-food plan and simple recipes specifically designed for the client.

e. SUMMARY

At the end of the first consultation, it was explained to the client that the nutritional therapy would be a multi stage process and the length and number of stages would depend on the intensity of the treatment and the progress of the patient. Any new stage would be decided after reviewing the progress of the patient during the previous stage and any symptoms, complaints, or other comments she might have. It was made clear to her that she would be an active participant to her treatment and that the nutritional therapy is not a diet with an expiry date but a new way of diet and lifestyle, a 'new page' in her life, and that the target is to get rid of, as much as possible, the old bad habits

3. EVALUATING AND REVIEWING EFFECTIVENESS OF NUTRITIONAL THERAPY

Due to the fact that the initial prescription was of a very low intensity, with a rather preliminary character, and in an attempt to monitor this specific patient more closely, she was asked to come for a second consultation earlier than usually.

2nd Consultation: (Duration of treatment: two weeks)

Client returned with the following comments

- Fells better overall and more active
- Bad headaches during the first day: alleviated with DLPA. After that she had them only twice in two weeks
- Ulcerative colitis: no symptoms
- At some point she had bad pain all over her body
- Developed mouth ulcers and her haemorrhoids were aggravated
- Constipation: very much improved, she has daily bowel movements, sometimes twice
- Weight: lost 2 kg
- Bloating: mild 1-2 hours after lunch time

2nd prescription: (*Appendix 17*)
In view of the patient's progress it was decided that the intensity of the treatment could be moderately increased at the second stage.

The Basic Formula One (containing the calcium to control the detoxifying effect of magnesium) was kept in the prescription but dosage increased. Calcium Pantothenate was added at a dosage of 2000mg daily to support adrenal function and handle aggravations. Attention was drawn to avoid taking this supplement in the evening due to its stimulating effect that might affect sleep. The rest of the supplements were left as the first prescription. Dietary changes included only the addition of one apple daily.

3rd Consultation: (Duration of treatment: four weeks)
Clients comments

- Feels 'much much better' very energetic!
- GI track: no pain, no bloating no vomiting, no constipation!
- Musculoskeletal pains and stiffness very much improved, she can walk for 40 minutes without pain
- Headaches: she had only one severe headache when she increased her formula
- Coughing: gone!
- Period: the lightest and least painful period she ever had!
- Urinate: reduced
- Water retention: improved

3rd prescription (*Appendix 18*)
In view of above progress, the patient was considered ready for a higher intensity, this time focusing on liver stimulation and support. Choline and Inositol Formula One –higher magnesium content but still calcium included- was added in full dosage (4 caps 3X daily), to substitute Basic Formula One. Calcium Pantothenate dose was reduced to 1000mg daily, since the patient had no significant aggravations to warrant the increased dosage and cost of this supplement. The rest of the supplements remained as previous prescription. Dietary changes included the addition of another fruit, increasing choices with pear and banana, and barley bread, (*barley is being extensively used for therapeutic purposes in the Mediterranean diet, and can be traced in the ancient treatises of Hippocrates, the Father of Medicine*)

4th Consultation: (Duration of treatment: 6 weeks)
Clients comments

- Lost 5kg in total
- Some dizziness at commencement of Choline & Inositol Formula one
- A vagina boil which lasted for 3 days
- Haemorrhoids also aggravated for 3 days
- Pains: almost gone!
- Ulcerative colitis: no more symptoms, no stomach pain, no vomiting even though she had gone through serious financial stress
- No more headaches
- Some constipation

4th prescription (*Appendix 19*)

The patient has made a great improvement in her health with many of her problems solved. However I had to make clear once again to her that health is not achieved with a two or three month nutritional programme and that she needs to follow the basic principles of healthy diet and lifestyle, as much as possible, for the rest of her life. I also advised her to have a consultation with her GP to review the state of her ulcerative colitis.

Consequently I proceeded to decrease her supplements gradually, while at the same time increased the intensity of treatment with Choline & Inositol Formula Two, which contains no calcium. Calcium Pantothenate reduced to 500mg daily and Pancreatin to two tablets daily. The plan was to further decrease supplementation at the next stage but the patient did not appear again. During the 4th consultation the patient stated that she had to move abroad where her husband was employed recently and she promised to continue her prescription and come back for the next appointment. However she did not appear again although she sent frequent regards and her gratitude for being pain-free and healthy.

Note: If X had entirely completed her treatment she would have received a final maintenance booklet with diet and lifestyle guidelines for the rest of her life as it happens with all patients who complete their treatments.

Nitsa Kiliari
Nutritional Medicine Practitioner

INITIAL CONSULTATION WORKSHEET

Name of the Patient: **X**

Date of Consultation: 24 January 2006

IRIDOLOGY EXAMINATION: 15 minutes
CASE HISTORY: 90 minutes

Time: **1 hour and 45 minutes**

THE CASE HISTORY

1. PRELIMINARY DETAILS

i. Personal details

Name: X
Gender: Female
Age: 44 (27/6/61)
Height: 1.68m
Weight: 72 kg
Marital status: married with one daughter

Address:
Tel: home: mob:
Email:
Blood pressure: 120/70 mmHg

ii. Studies

iii. Occupation

Present: unemployed
Past: office manager

iv. Physical appearance

Skin: open pores, brown spots
Hair: dull and oily
Teeth: too many mercury fillings but removed them 10 years ago (age 34)
Nails: strong, but white spots occasionally
Eyes: she had radial keratotomy on right eye and laser treatment to improve her left eye short sight (12.75 degrees) (50% improvement)
Varicose veins: a lot of thread veins and one medium size on her thighs

2. MEDICAL LIFE HISTORY

i. The present condition focusing upon the past year

Rhesus negative
Musculoskeletal system:

- Osteoporosis: Diagnosed last month on the spine. The symptoms are pains on the neck, shoulder, arm, ribs. She saw a chiropractor bad had no improvement. She was told that her bone density is of a 70 years old woman.
- Hip pain: she has it for the last 3 years. An x-ray showed nothing. She takes Joint ace for treatment and on and off and Voltaren for pain.
- Osteoarthritis: she was diagnosed last month with a neck disc worn away
- Cramps: she used to have frequent calf cramps but they stopped when her colitis started.
- Joint stiffness: Recently she has morning thumb joint stiffness

Bowels: She has chronic constipation. She has a bowel movement every 3 days and she actually never feels her bowel empty. She has frequent bouts of pain, and bleeding with bowel movements. Diagnosed with ulcerative colitis 3 months ago. When she is nervous or excited about something she gets some diarrhoea but not often. She uses Begunis tea for the constipation. She was prescribed Sulphasalazine tablets for her colitis which she takes for a month but she has not seen much improvement yet. Both a kinesiologist and a homoeopath told her that she has Candida.
Headaches: less often in the past but now she has them about twice weekly and takes aspirin.
Cravings: she has a lot of cravings for sweets. She took caprylic acid for some time.
Thrush: she had it three times in her life
Colds: she has chesty cough with heavy catarrh. She had sinus problems always with green mucus. She used to take a lot of antibiotics but not any more for quite a few years.
Stomach: she has pain with bloating. She noticed she gets indigestion with meat.
Sleep: she used to sleep well. Now her sleep is disturbed by pain (last 4 months)
Waterworks: she urinates quite a lot
Ovaries: Last summer she was diagnosed with an ovarian cyst. She was prescribed the Pill for one month and the cyst shrank
Menstruation: she always had, and still has, heavy bleeding, PMS: she feels irritated
Fatigue: she feels tired
Water retention: she feels her fingers puffy

ii. Babyhood and pre-school years

X's mother was 21 years old and healthy. However due to the fact that the father disappeared when he found out about her pregnancy she was very unhappy and anxious. After birth baby X had jaundice and she was given blood transfusion.
At 4 years old she had a hernia operation
Childhood diseases: Chickenpox
Other problems: Constipated all her life.

iii. School years up to age 18

At age 13-14: she had her first period
At age 17: she took the Pill for about 18 years up to age 35

iv. Adult life up to a year ago

At age 30: She had a cartilage operation on the knee and used steroidal creams
At age 39: she got married and had her baby
At age 40: she had her first pregnancy. During this period she had a lot of problems with her marriage. She had to have a Caesarean section because she was over her due date. She did not feel the baby. The doctor said the baby's heart was in distress. After the delivery, at 41 years old, she was sterilised because her husband did not want to take precautions.

At 41 years: she had an infection from the key-hold surgery (laparoscopy) for the sterilisation and had septicaemia. She went through an emergency operation to save her life.
At age 42: after a colonoscopy, she had precancerous polyps removed. She was then diagnosed with IBS.

3. DRUGS AND SUPPLEMENTS

For colitis: 112 Sulazine EC (Sulphasalazine)enteric coated tablets)
For hip pain:. Joint Ace (glucosamine / chondroitin
For Candida: caprylic acid
For sinus: Sudafed
For eyes: Various eye creams
For osteoporosis: calcium 600mg twice daily
Wellwoman Multivitamins

4. MEDICAL TESTS/REPORTS/DOCTOR'S DIAGNOSES

Degenerative changes in joints
Reduction of the space between spine vertebrae
Loss of normal spine arc
Shoulder calcification
Cholesterol: 248 mg/dl High
Triglycerides: 229 High (normal 150)
LDL cholesterol: 143: high (normal 130)
Tests for liver, gallbladder and pancreas: normal

5. PSYCHOLOGY

X had an unhappy life. Her father disappeared when he found out about her mother's pregnancy. She was brought up by her grandparents.
X's husband is Lebanese. He is a very demanding man and during some time he had also financial problems that made him worse. When she was 5 months pregnant he asked her to have an abortion. He is better now.

6. LIFESTYLE

Alcohol: 1-2 glasses of red wine twice weekly
Smoking: used to be a social smoker (5 daily) and stopped last Christmas)
Exercises: not much due to back problems

7. FAMILY HISTORY

i. FATHER'S FAMILY

a. Father

X never met her father so she has no information of any of his family

b. Paternal grand father

c. Paternal grandmother

ii. MOTHER'S FAMILY

a. Mother

She is 65 years with one brother, two sisters and one cot death. She was the first child. She has wine daily. She was a heavy smoker all her life.

- Cervix cancer
- Chronic diarrhoea
- Frequent colds/infections
- Chronic headaches
- Hypertension
- Chronic joint pains
- Morning joint stiffness
- Frequent mouth ulcers
- Fatigue and muscle weakness
- Poor memory
- Skin brown stains
- Artery bypass

b. Maternal grandfather

He died from heart attack at age 59. He was the first of two children. He smoked about 20 cigarettes daily for many years

c. Maternal grandmother

She died at 62 from stroke. She was the third of 4 children

iii. OFFSPRING

iv. BROTHERS AND SISTERS

No brothers or sisters

v. OTHER RELATIVES

8. DIET

Recently she gave up dairy products. She takes soya, fish

i. A TYPICAL DAY'S MENU during the last 3 months

a. Breakfast 6.00 am

Aloe vera juice first thing
After15 min: Jordan muesli with soya milk or porridge, pitta bread with halloumi or yoghurt and honey

b. 11.00 a.m

A fruit or a bar of chocolate

c. Lunch (2.30 pm)

Brown and wild rice with noodles or
Meatballs (soya) (twice weekly soya) or

Fish (1-2 times weekly) or
beans with rice and boiled veg or
pasta twice weekly
She has no raw salads due to colitis. She eats only boiled vegetables after lunch she wants something sweet

d. Dinner
Halloumi cheese with cucumber and tomatoes and brown pitta bread
Boiled egg

e. Snacks
Sugary things, chocolates and biscuits

f. Beverages
Herbal tea
One coffee daily

ii. A TYPICAL DAYS MENU before 3 months

More red meat, more wine, more chicken, a lot of cheese, and lot of yoghurt, olive and lots of milk (she always drank a lot of milk since she was brought up in a farm)

Nitsa Kiliari
Nutritional Medicine Practitioner

NUTRITIONAL TREATMENT

For

X

Date of consultation: 24 January 2006

Duration
Two weeks

Date given to the patient
6 February 2006

Next consultation
2 weeks after commencing the treatment

This prescription was designed exclusively for X

THE PRESCRIPTION

This treatment is designed on the basis of the following the conclusions derived after rigorous examination and interpretation of the facts obtained from your case history, including your medical and family histories

The purpose of this prescription is to:

1. Promote active elimination of the body's toxic load
2. Enhance liver function
3. Restore, wherever possible, nutrient deficiencies and mineral imbalances
4. Address the calcium dumping syndrome and osteoporosis
5. Enhance immune system function
6. Restore bowel flora balance
7. Control blood sugar level fluctuations

This prescription represents the first stage of your treatment. It should be followed for a period of two weeks, so long as no adverse reactions occur in the meantime. Subsequent stages and changes to the prescribed diet and supplements will be decided after reviewing your progress and position during the next consultation. Due to the fact that the treatment aims to release toxins from the liver and other parts of the body, I must draw your attention to the possibility of inconvenient or troublesome symptoms that may occur upon the application of this prescription. It is possible that your present symptoms may actually be aggravated. In order that your condition is monitored carefully, you should report immediately back to me any significant alterations or adverse reactions that may occur. Further steps may have to be taken in order to ameliorate the symptoms, or perhaps some changes may need to be made to the diet or supplementation accordingly. Please use the private telephone number **XXXXXXXX** in case anything more sudden occurs. Minor changes and mild symptoms are signs that elimination is occurring successfully and they should be reported during the next consultation.

CONTENTS

THE DIET

Please note that you should take 3 meals daily at regular intervals and two snacks in between meals

- ✓ **Breakfast:** this should be the largest meal of your day
- ✓ **Lunch:** Normal size meal
- ✓ **Dinner:** This should be the lightest meal.
- ✓ **Snacks:** Two snacks daily in between meals consisting of rice cakes, fruits or vegetables (carrots, celery, etc)

MEAT

No meats are used in this diet.

FISH

Fish may be included at ***three meals per week***, consisting of fresh or frozen fish but ***not packaged frozen fish or canned or packaged fish products***. ***Avoid*** fish that has been ***salted, cured or smoked***. Include some, at least, of the following: Fresh or frozen herring, eel, mackerel, salmon, sardines, tuna or cod roe. Shellfish or crustaceans (crab or lobster) may be taken once monthly, if fresh.
Caution! Avoid farmed fish.

EGGS

Two per week may be used.
Notes:

- **Eggs should be organic**. If you cannot find organic eggs it is better not to use any.
- **Please leave at least two days weekly without any animal food.**

FATS AND OILS

Use only olive oil in any heated dishes. In addition use edible ***linseed oil*** (one tablespoonful per day) as a salad dressing.
Caution!

- Linseed oil should be eaten raw (never heated) and should be kept refrigerated.
- Always buy oils (olive oil also) in ***small dark, tightly closed, glass bottles*** for maximum protection from light and oxygen. According to Dr Erasmus (1993) deterioration of oils by light starts from the minute they are exposed on supermarket shelves in light-coloured bottles. The best protection is ***'no exposure to light and oxygen"***.

FRIED FOOD

Fried food is excluded, except for ***stir-fry vegetables***, if desired, using only quick cooking in a small amount of olive oil, avoiding any excessively high cooking temperatures. Use this method of cooking only 2-3 times per week.

DAIRY PRODUCE

NO DAIRY PRODUCE OF ANY KIND is used in this diet, so all forms of ***milk,*** whether Pasteurised or not and from whatever animal, are excluded. Similarly are all kinds of ***cheese and yoghurt*** are excluded.

Beware of: packaged foods that contain 'hidden' milk in the form of ***milk powder***, ***skimmed milk powder***, ***sodium caseinate, lactalbumen*** or ***whey.***

Remember that dairy produce can occur in such diverse items as ***bakery products, meat products, desserts*** and ***margarines***.

OAT / RICE MILK

This may be used in moderation ie up to 150ml per day in place of other forms of milk.

SOYA BEAN MILK

This may be ***used in moderation***, for example, on porridge, on muesli, or in drinks, in place of ordinary milk. It is the heaviest form of vegetable protein to digest, so ***the quantity used should not be allowed to greatly expand***. It is not a very good idea, for example, to make rice puddings with it, because this employs too much soya milk.

Note: ***Buy only organic soya products made from whole soya beans***.

NUTS

Nuts can be sprinkled onto salads, used as the basis of main meals (e.g. nut roast, nut rissoles etc.) or turned into 'milk'. For the main-meal applications refer again to VEGAN cookery books, but use their recipes ***without the use of salt*** or salty condiments that they may recommend. Note the order of preference (in descending order): ***(1)Walnuts (2)Almonds (3) Cashews,*** Only these three should ever be used as the main base of a meal, or for milks or spreads. Other nuts, e.g. Brazils/walnuts, are acceptable in small amounts in cakes (if any of these are included in the Diet) or in small amounts to chew as kernels. ***Chestnuts are fully acceptable***, but their protein content is negligible.

Caution! Never eat any nuts that smell or taste tangy. Keep all nuts in the fridge especially in summertime. Always buy walnuts in their shells and consume them immediately after taken off their shells. These guidelines are important in order to reduce to the minimum any possible oxidative damage.

SEEDS

Sunflower, sesame or ***pumpkin*** seeds may be used. These seeds may be added to muesli, sprinkled onto salads or used on or in cooked dishes. ***Tahini***, from ground-up sesame seeds, is very good for spreading onto bread or toast (if the Diet contains them) or onto non-wheat bread or rice-cakes. ***Make sure the tahini does not contain any extra vegetable oil*** because this is usually hydrogenated vegetable fat. Please read the label before buying it. Furthermore take every day ***one tablespoon of linseeds, freshly ground*** (in a coffee grinder) and added to breakfast cereal or salads***.*** Alternatively add to a large glass of water and drink immediately after grinding.

Caution! Grinding of the seeds is an advantage to digestion, but they should be ***consumed immediately after grinding in order to avoid oxidative damage*** to the essential fatty acids. All seeds should be consumed ***fresh and unsalted***. They should be best ***stored in the fridge in dark containers***, especially during summer time.

PULSES

Pulses are included because they are a protein concentrate, and hence can be used to replace meat, dairy produce etc. ***Their full use is of great importance in cooking*** for the Nutritional Therapy patient so please, make very full use of recipes which highlight these items. They can form the main item in a dish (such as lentil roast, bean casserole etc.) They can also enrich the homemade soup (lentils are a good thickener when liquidized}. Refer for this purpose to VEGAN cookery books and VEGAN recipes, but use them ***without the additions of salt or salty condiments like soy sauce***, which they so often employ

GRAINS

WHEAT and RYE: This Diet contains ***no wheat or rye***, so all bakery goods - bread, cakes, biscuits, pastry and pasta are excluded. Guard against getting ***'hidden' wheat*** in the form of flour included in formulated packaged products.

RICE ***(brown, organic, shortgrain) or millet***, may be used ***without limit***. Aim to consume ***not less than 100g of*** **RICE** ***or*** **MILLET** ***per day*** (with rice being the greater part). The weight given is the weight of the grain before cooking; it gathers 2-3 times its own weight in water, during cooking. Some of the rice may be taken in the form of ***salt-free rice-cakes***. Please note that rice is a compulsory item in the diet since it will help elimination of toxins.

OATS may be used in porridge or homemade muesli, ***once per day***.
Note: ***Soak oats*** for several hours before consuming them (from the previous night if they are to be consumed at breakfast). Oaks need to be soaked in order to break down the phytates they contain which interfere with the absorption of nutrients from the gut.

Buckwheat, barley and ***sweetcorn*** may be used as occasional variations.

BREAD

No bread is allowed at this stage of the diet

POTATOES

Potatoes may be used subject to the condition that the rice or millet intake should not be compromised as a result. Discard any potatoes with sprouts or green areas.

VEGETABLES

It is very important that vegetable intake should be high (about ***40%*** of all food consumed).

Aim to take each day:

a) Two cloves of ***garlic*** daily
b) ***Ginger root*** (1-2cm square)
c) One large bowl of home made ***vegetable soup*** slightly thickened with lentils, if desired. Bone stock from chicken or lamb may be used by non-vegetarians, if desired.
d) One large ***fresh salad***, imaginatively prepared using multiple salad vegetables along with grated carrots, red or white cabbage etc.
e) ***Cooked vegetables*** with the main meal (boiled with minimum water, steamed or stir-fried as above).

Items a) to c) should be as plentiful and varied as possible
Items a) & b) each comprising a wide variety within each serving

The following vegetables have known anti-oxidant properties so give them preference:
Garlic, Cabbage, Red Cabbage, Red-Leaved Lettuce, Carrots, Celery, Parsley, Parsnips, Onions (especially red), Onions (green), Tomatoes, Aubergines, Broccoli (Broccoli helps the body get rid of the harmful type of oestrogen that promotes cancer), Cucumber, Kale, Cauliflower, Sweet Potatoes, Radishes, Brussels sprouts, Endives, Watercress, Pepper (capsicum). **Mushrooms are not included at this stage in your diet**

Caution!
Pepper, aubergines and ***tomatoes*** belong to the Nightshade family and contain natural ***toxins*** (Rudolph Steiner). Nonetheless, these vegetables are wholesome. Please place a limit on the use of these (taken together) of ***150g/day.*** ***Spinach***, and ***Swiss chard*** (λάχανα Κυπριακά) do not belong to the same family but also contain other natural toxins. Please limit the amount of these (taken together) to ***100g/day.***

SPICES AND HERBS

Herbs and ***mild spices*** are included wherever desired, so as to produce interesting flavours, and wherever corn has been included, ***corn flour*** may also be used occasionally, on a small scale, ***as a thickener***. It not then ***arrowroot*** can almost always be permitted.
Caution! If possible buy organic spices

FRUIT

No fruit are allowed at this stage of your diet.

DRIED FRUIT

No dried fruit are allowed at this stage of your diet

HONEY AND MOLASSES

No honey or molasses are allowed at this stage of you diet

BEVERAGES

This diet includes **NO COFFEE, NO BLACK or GREEN TEA**
Use only the following:

- **Herb teas:** Use fresh infusions of Nettle, Ginger, Fennel, Lemon Verbena, Chamomile etc. Use blends of different herbs or vary the type you buy.
- **Grain-based coffee substitutes** such as, Barley Cup, Caro, Caro Extra or Yannoh. Rooibosch tea. Dandelion coffee.
- **Water**

Nettle tea: Aim to drink 2-3 cups of good quality organic nettle tea every day in order to build up serotonin levels and strengthen kidney/adrenal function

WATER

Aim to drink, and cook with, filtered water. The best solution is to install an under sink reverse osmosis plant which will remove any pesticides, nitrates and nitrites, heavy metals, chlorine, PCBs, fluoride aluminium etc. It is essential that you drink at least ***2 litres of good quality bottled water daily***. This is best drunk ***at room temperature***, as iced water is not well absorbed by the body. Try to develop the habit of drinking the water gradually throughout the day (***sipping***), rather than too much at one time. The easiest way to do this is to have a bottle with you throughout the day and keep sipping from it. This is very important in order to help the body re-hydrate and rebalance. If you drink too much at a time, the water goes through you.

Note: Avoid drinking during meal times as gastric juices are diluted and digestion is impaired. Try to drink by the method of sipping, either 15 minutes before or 30 minutes after meals.

EXCLUDE

In addition to the items already mentioned, exclude the following:

- **Salt.** Alternatively you can use any ***salt substitute*** based wholly upon ***potassium***, such as ***Hipposal*** (it is sold in local health shops)
- **Sugar** of all kinds,
- **Frozen or canned fruit or vegetables,**
- **Texturized soya,**
- **Confectionery, ice-cream, chocolate,**

- **Carbonated beverages, sodas and squashes,**
- **Alcohol,**
- **Vinegar**
- **Yeast** or **yeast extract**, **Oxo**, **Marmite**, **Bovril**, **Vecon** and related products whether as **cubes** or as **pastes**, **soy sauce**, **miso**, **tamari**,
- **Made-up meat products** such as sausages, burgers, faggots, luncheon meat and
- **All canned products**.

GENERAL GUIDELINES

COOKING

- Food must never come in contact with direct heat. Always cook food covered in ***glass or stainless steel containers*** and try, as much as possible, to cook slowly under ***low fire***. Very high temperatures produce cancerous substances in our food. The safest and more nutritious food is that cooked in water ***(boiled) or steamed***. Water can never reach temperatures higher than its steaming point. So, contrary to conventional beliefs, the healthier part of bread is the soft inner part, which is actually steamed, not the crunchy outer part.
- Never use aluminium utensils or ***aluminium foil*** when cooking. Rapidly accumulating scientific evidence demonstrates high aluminium content in the brains of ***Alzheimer's patients***.
- Wherever possible, ***add the olive oil at the end of cooking***, a few minutes after removing food from fire. By this way you significantly reduce the risk of creating ***free radicals*** in the food.

EXERCISE

Take any form of exercise which you enjoy and which you can sustain for a minimum of 45 minutes at least 4 times per week. Perform a relaxation exercise (deep breathing, meditation, prayer, etc) 10-15 minutes daily.
The slant board: use it daily for about 5-10 minutes to improve blood and oxygen circulation to the head and brain area. The regular use of the slant board reverses the long-term bad effects of gravity on the brain and the spine.

QUALITY OF FOOD

Consume a diet that focuses on whole, unprocessed foods (whole grains, legumes, vegetables, fruits, nuts and seeds). Try to ***eat organic produce*** wherever possible, in order to eliminate the intake of more toxins and to ensure adequate supply of nutrients.

OVEREATING

Do not overeat. The body uses high amounts of energy to digest and process food. Energy is much needed for the body's detoxification processes and should not be wasted. Aim to feel light and comfortable after a meal.

RELAXATION

Relax during meals and eat slowly, chewing your food well. Do not eat if you are upset or stressed, as your digestion will be affected. Please note that food eaten under stress turns into bad energy into your body.

ENVIRONMENTAL TOXINS

Reduce chemical exposure from environment by avoiding the use of household chemical products (aerosols, insect sprays etc), gardening sprays and chemicals, cosmetics and hairsprays and oil and petrol fumes.

GENERAL GUIDELINES TO STABILIZE BLOOD SUGAR LEVELS

- Never eat carbohydrates alone. Eat them with protein of fatty food.

- Eat fewer carbohydrates if you are sedentary and/or overweight; eat more if you are active.

- Eat three small meals and two snacks daily.

- Strictly avoid any products containing sucrose, fructose, maltose, dextrose, polydextrose, corn syrup, maple syrup, molasses, sorbitol, maltodextrin. Always check the labels. Food products containing sugar and chemicals include barbecue sauces, fish sauces, ketchup, relishes, sweet pickles, Worcestershire.

- Strictly avoid smoked or cured meats which contain N-nitro-compounds. This substance is similar in structure and function to a compound (streptozotocin) that is used to induce diabetes in studies with animals (Pizzorno et al, 2002, p100)

- Strictly avoid salt and any hidden sources of it such as, soda bicarbonate (the common baking powder), and salted packaged food. The entry of insulin inside the cells in order to burn the glucose depends on salt which acts as a carrier. Excess of salt upsets this process and insulin cannot burn the sugar. (*this is an oversimplified prescription of the sodium pump function, to make it easily understood*)

SUPPLEMENTATION

➔ **Archturus Basic Formula One (180Caps)**
Take one capsule with each of three meals (total 3 capsules daily) for one week and then increase to 2 capsules with each of three meals (total 6 capsules daily)
Note: This is the main mineral/vitamin formula

➔ **Archturus Glucosamine & MSM**
Take 3 capsules with each of three meals (total 9 capsules daily). When pain recedes reduce to 2 capsules with each of three meals (total 6 capsules daily)

➔ **Inulac Tablets**
Chew one tablet followed with a large glass of water half hour before breakfast. After one week add another tablet in the evening before sleep (total 2 tablets daily)
Note: Probiotics may initially increase flatulence and bloating and may cause mild diarrhoea. If discomfort continues, reduce intake and increase the dosage gradually.

➔ **Nature's Plus Pancreatin tablets 1000mg**
Take one tablet just 10 minutes before each of three meals (total 3 tablets daily)

➔ **Archturus Betaine/Pepsin HCl tablets**
Take 2 tablets 10 minutes before each meal.

➔ **Orgnanic Linseed (Flaxseed) oil**
Take one tablespoon daily. Linseed oil should not be heated. It should be eaten raw.
***Note:** If you cannot take linseed oil order the linseed capsules and take 6 capsules daily with meals*
Please keep linseed oil always tightly closed and refrigerated.

➔ **Organic Flaxseed Meal**
Take two tablespoonfuls daily in a large glass of water or add it to you muesli.
Please keep linseeds always tightly closed and refrigerated.

TAKE THE FOLLOWING ONLY WHEN NEEDED
FOR HEADACHES MIGRAINES OR OTHER PAIN

➔ **Archturus DLPA Complex**
1 to 2 capsules 15 - 30 minutes before each meal (up to a maximum of 5 capsules daily). This supplement is most effective when taken half an hour before any meal or at bedtime
Caution
DLPA Complex must not be taken by Phenylketonuria sufferers (PKU). DLPA Complex should not be used with MAO inhibitors (a type of anti-depressant medicine). Not recommended for pregnant or lactating women.

FOOD PLAN – GENERAL GUIDE

The following recipes represent only some general guidelines to a healthier way of eating. Use your imagination to create your own recipes with the ingredients you prefer, as long as they are contained in your dietary programme.

BREAKFAST

Muesli with soya milk
Fill a breakfast bowl with:

- 2-3 tablespoonfuls oat flakes (soaked overnight) . You may use a mixture of pre-soaked oat, barley and rice flakes (3 tablespoons in total)
- one tablespoon pumpkin seeds (raw unsalted)
- one tablespoon sunflower seeds (raw unsalted)
- 1 tablespoonful freshly ground linseeds (grind them just before use)
- A glass of organic soya milk (Alternatively you can use rice milk or oat milk or water)

MID-MORNING OPTIONS

- Herb tea
- 2 rice or oat cakes spread with a little home made Houmous or tahini
- Vegetables (celery, carrots, cucumbers etc.)

How to cook brown rice

We need 2 ½ glasses of water (sometimes a bit more) for one glass of rice. Measure the water and boil it. Pour the rice (which you have washed well) stir it once and cover it. Lower the heat to 1/3 of the maximum. Make sure steam does not escape from the pot. Leave to cook for about 40 minutes, WITHOUT OPENING IT OR STIRRING IT AGAIN. With small portions cooking might take a little less, perhaps 35 minutes.

LUNCH or DINNER OPTIONS

Please try to eat your dinner before 8.00 pm and eat smaller portions for dinner compared to lunch. Do not eat anything after dinner except for relaxing herbal teas. Do not drink water with you meals. Allow about half an hour after meal and drink water by sipping.

1ST OPTION

Fish ,(preferably prepared by steaming, poaching or even baking in a covered glass or stainless steel container. This minimises damage or oxidation to the natural fish oils/essential fatty acids). Tinned tuna may also be used occasionally, though the brine water should be

rinsed off). Serve with boiled short grain **brown rice,** steamed **vegetables** and fresh **salad**. Use some **olive oil** and **lemon** for dressing. Add freshly ground **black peppe**r or other **spices** of your choice.

2nd OPTION

Beans (haricot, chickpeas etc) with boiled or fresh vegetables served with olive oil and lemon. Alternatively beans can be cooked with fresh tomatoes, onions and spices. Serve with **rice cakes**

3rd OPTION

Lentils with **brown rice**, onions, olive oil and spices. Serve with steamed **carrots, broccoli or cabbage.**

4th OPTION

Freshly prepared **vegetable soup**. Steam the vegetables and put them all in the liquidiser with a little **tahini, garlic, lemon, black pepper** and any spices or herbs of your choice. Serve with **rice cakes**

5th OPTION

Brown rice boiled. Stir in a little turmeric and serve with **fresh salad** or steamed **vegetables**. Add some **pumpkin seeds** and half an **avocado** to the salad. Use olive oil and lemon for dressing.

6th OPTION

Beetroot salad made with **beetroots, potatoes**, fresh **onion**s, one organic **egg,** and fresh **vegetables** of your choice (coriander, parsley etc). Add olive oil an lemon

7th OPTION

Rice or corn pasta made with home made **pesto sauce** or home made **tomato sauce** or **stir-fry vegetables** and **spices**. Serve with **fresh salad**

The Pesto Sauce

Put in a small mixer fresh or dried basil leaves, olive oil, pumpkin seeds, garlic, black pepper and add some of the water in which you have boiled the pasta. Make a delicious green paste and mix it with the pasta.

8th OPTION

Stuffed vines leaves, courgettes, onions and **eggplants**. Serve them with **fresh salad.**

Instructions:

Mixed brown rice with chopped **onion**s, **leeks, mushrooms, tomatoes, pine** or blanched **almond** nuts, olive oil, lemon, herbs, spices and any vegetables you like (artichokes cut in very small pieces make a good stuffing). Mixed them all together and stuff the vine leaves and any vegetables available (courgettes, aubergines, onions etc). Cook them in the oven in a covered glass or stainless steel container. Always cook your food at low temperatures (not higher than 190). Serve them with **fresh salad.**

9th OPTION

A large fresh salad made with any vegetables of your choice plus **walnuts, pumpkin seeds**, ground **linseeds** and **avocado**. Use olive oil and lemon for dressing. Alternatively, you may use a tablespoonful of **tahini** for dressing. Serve with **rice cakes.**

10th OPTION

Boil brown rice with a little turmeric. Keep it aside and prepare your vegetables.
Put in a pan a little olive oil and different vegetables such as, onions, peppers, courgettes, carrots, cabbage, peas or any other vegetables you like. Add herbs, such as oregano, thyme, cumin, as well as spices of your choice. If you like black pepper use it freely. You can add some carry powder if you like it.. Stir fry keeping low heat all the time. When the vegetables are slightly soft, add the rice into the pan and stir it in for a few minutes.

AFTERNOON OPTIONS

- Herbal tea
- Two rice cakes
- One fruit

EVENING

Relaxing herbal teas only.

X
23/2/06
Second prescription

➔ **Archturus Healthlink Basic Formula 1 (180Caps)**
Start increasing your daily dose gradually until you get up to 4 capsules with each of three meals (total 12 capsules daily)
Note: This is the main mineral/vitamin formula

➔ **Archturus Calcium Pantothenate (500) mg**
Take two capsules with your breakfast and two capsules with your lunch (total of 4 capsules daily) for two weeks. Avoid taking in the evening

➔ **Archturus Glucosamine & MSM**
Take 3 capsules with each of three meals (total 9 capsules daily). When pain recedes reduce to 2 capsules with each of three meals (total 6 capsules daily)

➔ **Inulac Tablets**
Chew one tablet followed by a large glass of water half hour before breakfast and one in the evening before sleep (total 2 tablets daily)

➔ **Nature's Plus Pancreatin tablets 1000mg**
Take one tablet just 10 minutes before each of three meals (total 3 tablets daily)

➔ **Archturus Betaine/Pepsin HCl tablets**
Take 2 tablets 10 minutes before each meal.

➔ **Orgnanic Linseed (Flaxseed) oil**
Take one tablespoon daily. Linseed oil should not be heated. It should be eaten raw.
Please keep linseed oil always tightly closed and refrigerated.

➔ **Organic Flaxseed Meal**
Take two tablespoonfuls daily in a large glass of water or add it to you muesli.
Please keep linseeds always tightly closed and refrigerated.

TAKE THE FOLLOWING ONLY WHEN NEEDED
FOR HEADACHES, MIGRAINES OR OTHER PAIN

➔ **Archturus DLPA Complex**
1 to 2 capsules 15 - 30 minutes before each meal (up to a maximum of 5 capsules daily). This supplement is most effective when taken half an hour before any meal or at bedtime
Caution
DLPA Complex must not be taken by Phenylketonuria sufferers (PKU). DLPA Complex should not be used with MAO inhibitors (a type of anti-depressant medicine). Not recommended for pregnant or lactating women.

Nitsa Kiliari
Nutritional Medicine Practitioner

DIET CHANGES/ADDITIONS

Fruit: add one green apple daily in your diet. Please do not eat apples with brown spots indicating the presence of yeast

X
9/3/06
Third prescription

➔ **Archturus Choline & Inositol Formula One (180 caps)**
Take 4 capsules three times daily with meals (total of 12 capsules)

➔ **Archturus Calcium Pantothenate (500) mg**
Take one capsule with your breakfast and one with your lunch (total of 2 capsules daily). Avoid taking in the evening

➔ **Archturus Glucosamine & MSM**
Take 2 capsules with each of three meals (total 6 capsules daily). When pain recedes reduce to 4 capsules daily

➔ **Inulac Tablets**
Chew one tablet followed by a large glass of water half hour before breakfast and one in the evening before sleep (total 2 tablets daily)

➔ **Nature's Plus Pancreatin tablets 1000mg**
Take one tablet just 10 minutes before each of three meals (total 3 tablets daily)

➔ **Archturus Betaine/Pepsin HCl tablets**
Take 2 tablets 10 minutes before each meal.

➔ **Orgnanic Linseed (Flaxseed) oil**
Take one tablespoon daily. Linseed oil should not be heated. It should be eaten raw.
Note: *If you cannot take linseed oil order the linseed capsules and take 6 capsules daily with meals*
Please keep linseed oil always tightly closed and refrigerated.

➔ **Organic Flaxseed Meal**
Take two tablespoonfuls daily in a large glass of water or add it to you muesli.
Please keep linseeds always tightly closed and refrigerated.

TAKE THE FOLLOWING ONLY WHEN NEEDED
FOR HEADACHES MIGRAINES OR OTHER PAIN

➔ **Archturus DLPA Complex**
1 to 2 capsules 15 - 30 minutes before each meal (up to a maximum of 5 capsules daily). This supplement is most effective when taken half an hour before any meal or at bedtime
Caution
DLPA Complex must not be taken by Phenylketonuria sufferers (PKU). DLPA Complex should not be used with MAO inhibitors (a type of anti-depressant medicine). Not recommended for pregnant or lactating women.

Nitsa Kiliari
Nutritional Medicine Practitioner

DIET CHANGES/ADDITIONS

FRUIT

Limited to ***apple, pear or banana***, no more than ***two fruits per day.*** No fruit juice or tomato juice. Citrus fruits are not allowed at this stage.

BREAD

Barley bread may be used at one meal per day, made with wholemeal barley and sour dough. Alternatively barley rusks, made with sour dough, can be used for meals in the office. Please ***make sure they don't contain wheat or rye***. Always read the labels.

X
23/3/06
Fourth prescription

➔ **Archturus Choline & Inositol Formula Two (180 caps)**
Take 4 capsules three times daily with meals (total of 12 capsules)

➔ **Archturus Calcium Pantothenate (500) mg**
Take one capsule with your breakfast

➔ **Archturus Glucosamine & MSM**
Take 2 capsules with each of three meals (total 6 capsules daily). When pain recedes reduce to 4 capsules daily

➔ **Inulac Tablets**
Chew one tablet followed by a large glass of water half hour before breakfast and one in the evening before sleep (total 2 tablets daily)

➔ **Nature's Plus Pancreatin tablets 1000mg**
Take one tablet 10 minutes before each of two main meals (total 2 capsules daily)

➔ **Archturus Betaine/Pepsin HCl tablets**
Take 2 tablets 10 minutes before each meal.

➔ **Orgnanic Linseed (Flaxseed) oil**
Take one tablespoon daily. Linseed oil should not be heated. It should be eaten raw.
***Note:** If you cannot take linseed oil order the linseed capsules and take 6 capsules daily with meals*
Please keep linseed oil always tightly closed and refrigerated.

➔ **Organic Flaxseed Meal**
Take two tablespoonfuls daily in a large glass of water or add it to you muesli.
Please keep linseeds always tightly closed and refrigerated.

TAKE THE FOLLOWING ONLY WHEN NEEDED
FOR HEADACHES MIGRAINES OR OTHER PAIN

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